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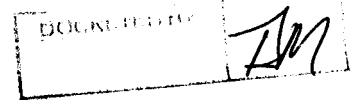


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Arizona Corporation Commission

DOCKETED

OCT 19 2012



TO: THE COMMISSION

FROM: Utilities Division

DATE: October 19, 2012

RE: UNS GAS, INC. - APPLICATION FOR APPROVAL OF ITS 2011-2012 GAS ENERGY EFFICIENCY IMPLEMENTATION PLAN (DOCKET NO. G-04204A-11-0149)

INTRODUCTION

On April 4, 2011, UNS Gas, Inc. ("UNS Gas" or the "Company") filed an application with the Arizona Corporation Commission ("Commission") requesting approval of its 2011-2012 Gas Energy Efficiency Implementation Plan ("EE Plan") and a change to its Demand-Side Management ("DSM") Surcharge ("DSMS").

On September 6, 2011, UNS Gas filed updated information applicable to its EE Plan. Specifically, UNS Gas updated the budget information and portfolio savings filed in its original application. UNS Gas also filed to update the DSMS that was filed in its original application and requested a waiver and modification of the Gas Energy Efficiency Standards ("GEES") pursuant to A.A.C. R14-2-2520 and the Cumulative Energy Efficiency Standard set forth in A.A.C. R14-2-2504.B.

On April 17, 2012, UNS Gas filed an amendment to its original application for its EE Plan to include approval for the 2013 Energy Efficiency Plan ("2013 Plan"). The Company does not plan to propose any changes to the proposed EE Plan programs, budgets, or DSMS previously filed in this docket and requested the Commission waive the requirement for the Company to file a separate 2013 Plan. UNS Gas also filed to modify its previous request for a waiver of the GEES to incorporate a new table outlining the GEES levels the Company believes it can obtain.

UNS Gas is certificated to provide natural gas service as a public service corporation in the State of Arizona. UNS Gas is a wholly-owned subsidiary of UniSource Energy Services and is engaged in providing natural gas service within portions of Arizona, pursuant to authority granted by the Commission. UNS Gas provides natural gas service in the counties of Apache, Coconino, Mohave, Navajo, Santa Cruz and Yavapai. As of December 2011, the Company had over 147,500 customers. Of that total, approximately 135,050 are Residential customers. The remainder are a mix of Commercial, Industrial, and Municipal customers.

EE PLAN OVERVIEW

UNS Gas' EE Plan contains new programs, enhancements to existing programs, and continued support for already successful programs. The EE Plan is designed to comply with the Commission's GEES and to provide a framework for future compliance. For the Company's existing and proposed DSM programs, the EE Plan estimates each program's total cost and the

cost per therm reduction, and explains how these programs comply with the requirements in the GEES. The EE Plan also includes a tariff filing that complies with A.A.C. R14-2-2506.A and includes a request to modify and reset the existing adjustment mechanism for implementation through 2012.

To implement the EE Plan, UNS Gas is requesting an updated plan budget total of approximately \$5.98 million. With the amended filing on September 6, 2011, UNS Gas is requesting a DSMS of \$0.0283 per therm. The current DSMS is \$0.0084 per therm. The amended filing for the EE Plan represents an increase of \$0.0199 per therm.

The UNS Gas EE Plan includes the implementation of new programs, changes to current programs, and the continuation of cost-effective DSM programs already in place. Included in the new programs are: Multifamily Direct Install, Behavioral Comprehensive (including Home Energy Reports and K-12 education), Education and Outreach, Codes and Support, and a Renewable Energy Technology ("RET") program for Solar/Thermal Water Heating. The Company also is enhancing current programs through the addition of new measures to Existing Homes/Direct Install and Commercial and Industrial ("C&I") Facilities. UNS Gas has also filed to increase eligibility for its existing Low Income Weatherization Program ("LIWP") and to continue administering the Joint Utility Residential New Construction and Energy Efficiency Residential Financing program. The UNS Gas EE Plan includes a mix of programs targeted to multiple customer segments as detailed below.

Residential Programs

- Existing Homes
- New Construction
- LIWP
- Energy Financing
- Home Energy Reports
- Behavioral Comprehensive Program
- Solar Thermal Water Heating (RET)

Non-Residential Programs

- C&I Facilities
- Multifamily Direct Install
- Solar Thermal Water Heating (RET)

UNS Gas is also proposing a new Codes Support program and a new Education and Outreach program applicable to both residential and non-residential customers.

The EE Plan includes new measures for existing programs in addition to modifying some existing programs, detailed in the table below.

**2011-2012 Proposed Energy Efficiency and Demand Response Program
 Modifications or Additions**

Residential Existing Homes	
HVAC	<ul style="list-style-type: none"> • Add a High Efficiency Residential Steam Heating Boiler as an available energy efficiency upgrade.
Water Heating	<ul style="list-style-type: none"> • Add Pipe Wrap as an available energy efficiency upgrade. • Add High Efficiency Pool and Spa Heaters as available energy efficiency upgrades.
Residential New Construction	
Joint Utility New Home Construction	<ul style="list-style-type: none"> • Updated construction standards for builders to Energy Star® Version 3.
Residential LIWP	
Home Weatherization	<ul style="list-style-type: none"> • Modify income eligibility from 150% of poverty level to match Low Income Home Energy Assistance Program. • Increase the maximum spending per home from \$2,000 to \$3,000.
Residential Energy Financing	
Upgrade Financing	<ul style="list-style-type: none"> • Request to continue Pilot Program which provides financing for existing homes wanting to implement more efficient upgrades.
Residential Behavioral Comprehensive Program	
Energy Reports	<ul style="list-style-type: none"> • Implement a new Pilot Program comparing energy use of one customer to neighbors or comparable households.
K-12 Education	<ul style="list-style-type: none"> • Implement a new program utilizing enthusiasm of kids and the community focal point of schools to push parents to take energy efficiency action.
Residential Solar Water Heating	
Water Heating	<ul style="list-style-type: none"> • Implement a new program offering incentives to participating new construction or retrofit customers on qualified solar thermal systems upon proof of purchase after system is installed and operational.
Commercial & Industrial Facilities	
Cooking	<ul style="list-style-type: none"> • Add a measure for High-Efficiency Fryers with incentive paid to contractor. • Add a measure for High-Efficiency Large Vat Fryers with incentive paid to

	<p>contractor.</p> <ul style="list-style-type: none"> • Add a measure for High-Efficiency Combination Oven with incentive paid to contractor. • Add a measure for High-Efficiency Convection Oven with incentive paid to contractor. • Add a measure for High-Efficiency Conveyor Oven <25" with incentive paid to contractor. • Add a measure for High-Efficiency Conveyor Oven >25" with incentive paid to contractor. • Add a measure for High-Efficiency Single Rack Oven with incentive paid to contractor. • Add a measure for High-Efficiency Double Rack Oven with incentive paid to contractor. • Add a measure for High-Efficiency Energy Star® Steam Cooker with incentive paid to contractor.
HVAC/Process Heat	<ul style="list-style-type: none"> • Add a measure for High-Efficiency Condensing Unit Heaters (131,000-305,000 Btuh) with incentive paid to contractor. • Add a measure for Power-Vented Unit Heaters (150,000-300,000 Btuh) with incentive paid to contractor. • Add a measure for Programmable Thermostats with incentive paid to contractor. • Add a measure for Custom Modifications covering 75% of incremental costs for a custom project equivalent to \$2,700 based on first year savings with incentive paid to contractor. • Add a measure for High-Efficiency Space Heating Steam Boilers (>300 kBtuh) with incentive paid to contractor. • Add a measure for Survey and Replacement of Commercial Steam Traps. • Add a measure for Survey and Replacement of Industrial Steam Traps.
Water Heating	<ul style="list-style-type: none"> • Add a measure for High-Efficiency Pool

	<p>and Spa Heaters (<500 kBtuh) with incentive paid to contractor.</p> <ul style="list-style-type: none"> • Add a measure for Low-Flow Pre Rinse Spray Valves with incentive paid to contractor. • Add measures for Commercial Multi-Family Clothes Washers CEE Tier 1, 2, and 3.
Multifamily Direct Install	
Water Heating	<ul style="list-style-type: none"> • Implement a new program with a measure for Low Flow Shower Head (1.5 GPM) with incentive paid to contractor. • Implement a new program with a measure for Kitchen Faucet Aerators (1.5 GPM) with incentive paid to contractor. • Implement a new program with a measure for Bathroom Faucet Aerators (1 GPM) with incentive paid to contractor.
Non-Residential Solar Water Heating	
Water Heating	<ul style="list-style-type: none"> • Implement a new program for qualified solar thermal systems new construction and retro-fit Commercial Gas Water Heater with incentive offered upon proof of purchase after system is installed and operational.
Other Support Programs	
Codes Support	<ul style="list-style-type: none"> • Implement a new program to increase energy savings through improving levels of compliance with existing building energy codes and supporting/informing residential and commercial sectors of energy code updates.
Education and Outreach	<ul style="list-style-type: none"> • Implement a new program to provide customers with the tools and knowledge necessary to better manage their energy use including marketing/education on available DSM options and the importance of energy efficiency.

The Commission approved the GEES in Decision No. 72042 on December 10, 2010, in Docket No. RG-00000B-09-0428. The rules are designed to cause affected utilities to achieve therm or therm equivalent savings through DSM and RET programs in order to ensure reliable gas service at reasonable rates and costs. As established in these rules, "energy efficiency" means the production or delivery of an equivalent level and quality of end-use gas service using less energy, or the conservation of energy by end-use customers. Energy efficiency is a type of DSM.

DSM programs promote materials, devices, technologies, educational programs, practices, or facility alterations designed to result in increased energy efficiency, including combined heat and power used to displace space heating, water heating, or another load. RET programs promote technology applications.

The GEES rules outline specific cumulative annual energy savings by calendar year. Under A.A.C. R14-2-2504.B, UNS Gas is required to meet a cumulative annual energy savings for calendar year 2011 of 0.50% of retail energy sales in the prior year. For 2012, that cumulative annual energy savings is 1.20% of retail energy sales in the prior year. As can be seen on the table below with information based on UNS Gas' most recently filed Annual DSM Progress Report filed on April 2, 2012, UNS Gas reached a cumulative annual EE savings as a percent of previous year's retail sales of 0.20%.

UNS GAS REQUIRED ENERGY EFFICIENCY STANDARDS				
	2010	2011	2012	2013
Actual/Projected Sales (therms)*	140,222,684	139,990,850	155,214,185	157,644,118
Required Savings (%)		0.50%	1.20%	1.80%
Required Savings From Prior Year Sales (therms)		701,113	1,679,890	2,793,855
Energy Efficiency Programs Savings (therms)**		281,203	108,000	705,000
Renewable Energy Technology Programs Savings (therms)***		0	0	33,400
Total Savings (therms)		281,203	108,000	738,400
Total Cumulative Savings (therms)		281,203	389,203	1,127,603
Savings (%)		0.201%	0.278%	0.726%
Difference Between Required Savings and Projected/Actual Savings(therms)		419,910	1,290,687	1,666,252

*2010 and 2011 sales represent actual sales collected from annual reports.

**2011 therm savings are from 2011 UNS Gas DSM 2011 Portfolio Savings Report.

***Renewable Energy Technology Programs Savings (therms) were revised in August 2012 to include therm savings for Solar Water Heating Commercial Gas New Construction.

PROPOSED PROGRAM CHANGES

UNS Gas' EE Plan is comprised of several new programs falling into both the residential and non-residential categories and new programs which apply across both categories of customers. UNS Gas has designed a comprehensive portfolio of programs in an effort to deliver gas energy savings to meet, or come close to meeting, annual DSM energy savings goals as outlined in the GEES. Due to the delay in the processing of the EE Plan, UNS Gas has requested previously filed 2011 budget information be used for the remainder of 2012 and previously filed 2012 budget information be used for 2013.

A. Residential Programs: Existing Homes

UNS Gas is requesting budget approval to continue this program (previously referred to as the Residential HVAC Program and Efficient Home Heating Program) plus approval for adding these additional measures: high-efficiency residential boilers; pipe wrap; and high-efficiency pool and spa heaters.

Current Program

This program was approved by the Commission in Decision Nos. 72045 dated December 10, 2010, and 72056 dated January 6, 2011. The program is targeted to all existing homes in need of energy efficiency improvements. The program has two components. The first component is the current program. It involves an initial energy audit including the direct installation of low-flow shower heads and faucet aerators. This is followed by the identification of larger home energy efficiency improvements and a referral to a Building Performance Institute (“BPI”) certified contractor who will assist with the larger improvements.

Proposed Changes

UNS Gas is requesting to continue the current residential existing homes program and add to it a second component that promotes the installation of pipe wrap, high-efficiency boilers, and high-efficiency pool and spa heaters. The program hopes to achieve increased energy savings from the installation of even more energy-efficient measures and contribute toward transforming the industry to emphasize best practice building science principles.

The high-efficiency steam heating boilers will be offered with an incentive of \$500 per unit for a replacement on burnout of existing boilers. UNS Gas estimates to install 50 units the first year and 60 units the second year. The pipe wrap option will be an option for a homeowner to add pipe wrap to pipes on an existing water heater. UNS Gas plans to offer pipe wrap on the first six feet of pipe with an incentive of \$12 per installation. They plan to install 200 units the first year and 300 units the second year. The high-efficiency pool and spa heater option is a replacement on burnout option allowing for an incentive of \$150 per unit with an estimated 5 units installed in each of the two years. UNS Gas will provide program management, oversight, and marketing through website promotion, community interest groups, mass-market channels, brochures and bill inserts, trade ally marketing efforts, contractor enrollment and training.

A third party implementation contractor will be responsible for the recruitment, training, and mentorship of participating contractors, retailers and manufacturers; training energy auditors; data tracking; rebate processing; and technical support. Program delivery will be coordinated with Arizona Public Service (“APS”) and UNS Electric to address any overlap among the utilities.

Proposed Budget

The 2012-2013 proposed budgets for the Residential Existing Homes Program is detailed below (with adjustments made to incentives and other program costs per UNS Gas’ request in August 2012). Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential Existing Homes Program Budget

	2012	2013
Incentives*	\$176,894	\$612,076
Program Delivery**	\$354,438	\$421,148
Program Marketing	\$53,133	\$100,797
Utility Program Administration	\$23,981	\$24,701
Evaluation	\$24,338	\$45,339
Total Program Cost	\$632,784	\$1,204,061

*Max incentives were adjusted from \$350 per audit with 250 audits as the goal to a max incentive of \$200 per audit with 250 audits per the Company's request.

**Program Delivery Costs were reduced by \$100,000 from the original application per the Company's request.

Cost Effectiveness

Staff's review of the benefits and costs associated with the proposed changes with the addition of new measures in the Residential Existing Homes Program found that one of the new measures is not cost-effective at this point in time. Given the nature of the current natural gas market, the benefits in terms of therm and capacity savings do not outweigh the costs associated with the high efficiency boiler measure. Staff's benefit-cost analysis is presented in the table below.

Measure	Units	Present Value DSM Savings	Present Value DSM Cost	Benefit/Cost Ratio
High Efficiency Boiler	60	\$23,001.98	\$40,735.68	0.56
Pipe Wrap	300	\$5,249.22	\$5,193.74	1.01
Pool and Spa Heater	5	\$1,067.72	\$1,007.37	1.06

Recommendations

UNS Gas' analysis submitted with its original application indicated the Company had calculated a measure level Societal Cost Test ratio for the three new measures as 1.2 for the boiler, 1.2 for the pipe wrap, and 2.2 for the pool and spa heaters. Staff's analysis led to the benefit-cost ratios indicated in the table above. Variances in the results can be pinpointed to a few analysis differences including the fact that Staff's analysis includes the Program Level Non-Incentive Costs into the cost per unit at the measure level. UNS Gas did not include program costs in its Societal Cost Test analysis. Staff also utilized a calculated after-tax cost of capital as the discount rate for UNS Gas equal to 6.99% based on data from UNS Gas' last rate case (Decision No. 73142 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate. The avoided natural gas cost used in Staff's calculation was based on index pricing provided by UNS Gas dated May 18, 2012. UNS Gas' original application utilized avoided costs for UNS Gas as of August 4, 2010.

The last approved budget for this program was approved in Decision Nos. 72045 and 72056 equal to \$1,077,145 for 2011. The proposed budget for this program for 2012 as can be seen above is \$632,784 which represents a decrease of \$444,361 or roughly a 41% decrease. The increase in budget dollars for 2013 can be attributed to an increase in the projected number of installed units associated with each approved measure.

Given the results of Staff's cost-benefit analysis, Staff recommends approval of the pipe wrap and the high efficiency pool and spa heaters but does not recommend approval of the high efficiency boiler as a new measure for the Residential Existing Homes Program.

B. Residential Programs: New Construction

UNS Gas is requesting budget approval to continue this program with one modification that updates the construction standard and energy savings to Energy Star® v3.

Current Program

This program was approved by the Commission in Decision No. 72023 dated December 10, 2010, as the Energy Smart Home-Joint Program. The program is designed with an incentive schedule that awards builders an additional incentive for installation of more efficient gas heating and water heating equipment than that required in the residential new home construction program. To qualify for an incentive, homes must first qualify for the APS Energy Star new home program, be tested by an approved energy rater, and finally meet the required Home Energy Rating System ("HERS") Index score.

Proposed Changes

No new measures were requested for this program; however, new savings estimates were completed to update construction standards to Energy Star® v3.

Proposed Budget

The 2012-2013 proposed budgets for the Residential New Construction Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential New Construction Program Budget

	2012	2013
Incentives	\$8,800	\$10,600
Program Delivery	\$114,208	\$101,742
Program Marketing	\$11,846	\$10,819
Utility Program Administration	\$11,991	\$12,350
Evaluation	\$5,874	\$5,420
Total Program Cost	\$152,718	\$140,932

Cost Effectiveness

Staff did not complete a new cost-benefit analysis for this program as UNS Gas did not propose any changes to the existing approved measures.

Recommendations

The last approved budget for this program was in Decision No. 72023 and was equal to \$218,375 for 2011. The proposed budget for this program for 2012 as can be seen above is \$152,718 which represents a decrease of \$65,657 or roughly a 30% decrease. Staff recommends continuation of the current program at the proposed budget numbers.

C. Residential Programs: Low Income Weatherization

UNS Gas is requesting budget approval to continue the LIWP and modify the income eligibility levels from 150% of poverty level to track more closely with the percent of poverty level set by the Low Income Home Energy Assistance Program ("LIHEAP"). The current level set by LIHEAP is approximately 200% of poverty level. UNS Gas is also requesting a change to increase the maximum spending per home from \$2,000 to \$3,000 to be consistent with the funding given per home for UNS Electric and Tucson Electric Power Company ("TEP").

Current Program

This program was approved by the Commission in Decision No. 70180 dated February 27, 2008. The program is designed so that funding from UNS Gas, up to \$2,000 per home currently, is utilized to pay for energy efficient weatherization measures, equipment replacement and/or repair and other home improvements which may lower the average household energy consumption for low-income customers within the UNS Gas service territory. Weatherization measures are conducted in accordance with the Weatherization Assistance Program ("WAP") funded by the U.S. Department of Energy.

Proposed Changes

UNS Gas is requesting to continue the current residential Low Income Weatherization Program with an increase to the funding per home from \$2,000 to \$3,000 and adjust the income eligibility levels from 150% of poverty level to track more closely with the percent of poverty level set by LIHEAP.

Proposed Budget

The 2012-2013 proposed budgets for the Residential Low Income Weatherization Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential Low Income Weatherization Program Budget

	2012	2013
Incentives*	\$300,000	\$309,000
Program Delivery	\$19,113	\$19,686
Program Marketing	\$0	\$0
Utility Program Administration	\$7,994	\$8,234
Evaluation	\$13,084	\$13,477
Total Program Cost	\$340,191	\$350,397

*UNS Gas filed the \$3,000 per customer paid to the weatherization agency as an incentive. Staff does not consider dollars paid for a good or service as incentive dollars.

Cost Effectiveness

Staff's review of this program included an examination of the results from the LIWP for January through December 2011. According to the Annual DSM Progress Report filed by UNS Gas in April 2012, UNS Gas had 117 households receive weatherization assistance during 2011. The goal for the calendar year 2011 was 125 households. Savings reported for the same time period are 267,480 kWhs and 13,224 therms. By mid-year 2011, the Northern Arizona Council of Governments ("NACOG") had utilized all of the annual budget allocated to NACOG. An

increase of \$25,000 was provided to NACOG in July 2011. NACOG completed 63% of the homes weatherized in 2011 for UNS Gas. No program marketing dollars were spent on this program in 2011 and none are being requested in 2012 as the popularity of the program is high without the need for advertising and promotion.

Recommendations

The last approved budget for this program was in Decision No. 70180 equal to \$123,915 for 2011. The proposed budget for this program is \$340,191 which represents an increase of \$216,276 or roughly a 175% increase. Given the high degree of interest in the program in 2011, Staff recommends continuing the LIWP.

The change requested by the Company to increase the income eligibility from where it is currently set at 150% of the federal poverty level to track with LIHEAP which is currently 200% of poverty level seems reasonable to Staff as these guidelines are also used by the Governor's Office Of Energy Policy. However, Staff does not recommend approval of UNS Gas' request to provide increased dollar allocations per home being weatherized. Staff's benefit-cost analysis for the increase in spending versus leaving the per home dollar allocation where it is now revealed the current level of allocation is just slightly under 1 with a benefit-cost ratio of 0.98. Given that the environmental benefits that can be achieved from the LIWP are not monetized by Staff, Staff recommends continuing with the current per home allocation of \$2,000.

D. Residential Programs: Energy Financing

UNS Gas is requesting budget approval to continue this pilot program with no modifications.

Current Program

This program was approved by the Commission in Decision No. 72062 (January 6, 2011) as a two-year pilot program. The program offers energy efficiency loans to UNS Gas customers who are seeking financing to assist in paying for energy efficiency improvements to their homes. Loan dollars can be used for energy efficiency measures that have been approved by the Commission as part of the Residential Existing Homes program. The program objective is to offer 9.99% interest unsecured loans with a 2% interest rate buy down resulting in a low-interest loan at 7.99%. Loans are available for up to \$10,000 with repayment terms up to 12 years.

Proposed Changes

UNS Gas is requesting to continue the current residential energy financing pilot program and to add those new measures submitted with the proposed changes to the Residential Existing Homes Program (pipe wrap, high-efficiency boilers, and high-efficiency pool and spa heaters) to the list of approved measures for which the loan can be used.

Proposed Budget

The 2012-2013 proposed budgets for the Residential Energy Financing Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential Energy Financing Program Budget

	2012	2013
Incentives	\$3,993	\$108,000
Program Delivery	\$93,673	\$359,533
Program Marketing	\$30,000	\$25,000
Utility Program Administration	\$3,997	\$8,234
Evaluation	\$5,000	\$5,150
Total Program Cost	\$136,663	\$505,917

Cost Effectiveness

Staff's review of this program included an examination of the results from the Residential Energy Financing Program for January through December 2011. According to the Annual DSM Progress Report filed by UNS Gas in April 2012, UNS Gas had no participants in this pilot program during 2011 and there were no savings reported for the same time period. Expenses for 2011 totaled \$16,917. UNS Gas redirected its efforts during 2011 to focus more on a local lending partner given the relative small scale of the program. In December 2011, UNS Gas had a contract with Vantage West Credit Union in Tucson to fund the residential loans. The loan terms from the original agreed upon terms in Decision No. 72062 have changed slightly with the switch to an in-state lender. There will be a reduction in the buy-down costs of approximately \$310,000 during the first two years of the program, a more liquid treatment of the loan loss reserve account, and a reduction in the term of the loan for the residential customer from 12 years to 10 years.

Recommendations

After talking with UNS Gas, Staff understands the challenges UNS Gas has faced in implementing this program during a downturn in the economy when so many residential customers are struggling to stay employed and pay existing bills. According to UNS Gas, it has had little interest from customers but have a good dialogue open with participating contractors and are compiling feedback on barriers. UNS Gas traditionally has low participation in measures over the summer but plans to make an appeal to step up recruiting of participants in the fall.

The last approved budget for this program was in Decision No. 72062 equal to \$321,386 for 2011. The proposed budget for this program is \$136,663 which represents a decrease of \$184,723 or roughly a 57% decrease.

Given the slow start to the implementation of this pilot program tied to external circumstances such as the downturn in the economy and the recent lender changes made by UNS Gas, Staff believes that additional time is needed to accurately assess the interest in this program. Staff recommends continuing the current program and then re-evaluating the program in UNS Gas' next EE Implementation Plan to gauge if interest and participation have increased.

E. Residential Programs: Home Energy Reports

UNS Gas is requesting budget approval to implement a new pilot program/measure as part of the new Behavioral Comprehensive program. The Behavioral Comprehensive program is designed to provide customers with more information to allow them to better understand and

manage their energy usage. This pilot program will take the form of distributing reports on an opt-out basis to UNS Gas customers chosen at random that compare a customer's energy use to that of neighbors with similar home attributes. The result would be to instill a sense of competition and action in customers leading to reduced energy consumption.

Current Program

This is a new program and does not replace or modify any current program.

Proposed Changes

UNS Gas' Home Energy Reports Pilot Program is designed to affect habitual behaviors in customers such as adjusting the thermostat, affect purchasing behaviors such as buying efficient gas appliances, and affect the behavior of customers to participate in DSM programs. UNS Gas is proposing a two-year pilot program with gas-only and dual-fuel home energy reports. Because of the established boundaries of UNS Gas' service territory, UNS Gas has customers who receive gas service from UNS Gas and electric service from UNS Electric or APS. UNS Electric and APS currently have programs in place similar to the Home Energy Reports Program that UNS Gas is proposing (UNS Electric's program was approved in Decision No. 72747 dated January 20, 2012 and APS' program was approved in Decision No. 71950 dated November 1, 2010.). UNS Electric has agreed to work with the third party contractor, OPower, to implement dual-fuel reports for those customers in both the UNS Gas and UNS Electric service territories. OPower will provide gas-only home energy reports for UNS Gas customers in the APS service territory as APS did not intend to provide customers in the UNS Gas service area with home energy reports.

UNS Gas is proposing the Home Energy Reports Pilot Program as a pilot program giving the Company time to gauge the effect of dual-fuel reports. It is uncertain at this point in time whether UNS Electric customers receiving dual-fuel reports will elect to implement changes that generate more electric or more gas savings. UNS Gas will bear the incremental increase in cost to develop the dual-fuel reports. UNS Electric will report the electric energy savings from the joint-utility homes while UNS Gas will report the gas energy savings from the same homes and not report the electric savings as therm equivalents.

Proposed Budget

The 2012-2013 proposed budgets for the Residential Home Energy Reports Pilot Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential Home Energy Reports Pilot Program Budget

	2012	2013
Incentives*	\$0	\$105,000
Program Delivery	\$22,204	\$17,720
Program Marketing	\$0	\$0
Utility Program Administration	\$0	\$4,117
Evaluation	\$0	\$1,268
Total Program Cost	\$22,204	\$128,105

*UNS Gas filed the report cost per customer paid to OPower as an incentive. Staff does not consider dollars paid for a good or service as incentive dollars.

All Home Energy Reports will be automatically mailed to the selected customers by OPower. There are no direct marketing dollars allocated for this program.

Cost Effectiveness

Staff's review of the benefits and costs associated with the proposed new Residential Home Energy Reports Pilot Program found that the home energy reports are not cost-effective at this point in time. In the analysis, Staff utilized UNS Gas' energy savings estimates which were based upon information provided by OPower. The savings estimates took into consideration that it is common for first year energy savings to be less than the second year energy savings due to the persistence of messaging received by customers and the impact of this messaging on customer behavior. Savings estimates average 1.15% of annual usage for each of the two years.

Measure	# of Participating Customers	Present Value DSM Savings	Present Value DSM Cost	Benefit/Cost Ratio
Gas-Only Energy Report	10,000	\$38,325.56	\$79,544.45	0.48
Dual-Fuel Energy Report	15,000	\$29,789.41	\$40,190.88	0.74

Recommendations

UNS Gas' analysis submitted with its original application indicated the Company had calculated a measure level Societal Cost Test ratio for the Home Energy Reports as 1.02 for the gas-only report, and 1.9 for the dual-fuel report. Staff's analysis led to the benefit-cost ratios indicated in the table above. Variances in the results can be pinpointed to the fact that Staff's analysis includes the Program Level Non-Incentive Costs into the cost per unit at the measure level. UNS Gas did not include program costs in its Societal Cost Test analysis. Staff also utilized a calculated after-tax cost of capital as the discount rate for UNS Gas equal to 6.99% based on data from UNS Gas' last rate case (Decision No. 73142 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate. The avoided natural gas cost used in Staff's calculation was based on index pricing provided by UNS Gas dated May 18, 2012. UNS Gas' original application utilized avoided costs for UNS Gas as of August 4, 2010.

Given the results of Staff's cost-benefit analysis, Staff does not recommend approval of the gas-only and dual-fuel home energy reports as new measures for the residential segment.

F. Residential Programs: K-12 Education Kit

UNS Gas is requesting budget approval to implement a K-12 Education measure as part of the new Behavioral Comprehensive program. As noted above, the Behavioral Comprehensive program is designed to provide customers with more information to allow them to better understand and manage their energy usage. This K-12 program incorporates energy-based classroom curriculum instructing students on energy saving approaches that can be implemented in their homes. This program is an extension of the existing UNS Electric education program approved in Decision No.70401 (July 3, 2008).

Current Program

This is a new program and does not replace or modify any current program.

Proposed Changes

UNS Gas is requesting to implement a K-12 Education program which will target teachers who are willing to add the energy-based classroom curriculum to their existing educational program. The K-12 Education approach involves sending students home with energy conservation kits containing a low-flow shower head, faucet aerator, and furnace whistle in addition to educational materials regarding actions that can be taken to reduce energy use. A student report card will be developed to determine how many of the items delivered in the kit were actually installed. Implementation will be handled by a third party contractor, and extra effort will be made to coordinate the school program with other energy efficiency efforts in the same neighborhood. UNS Gas estimates delivering 1,000 energy conservation kits in the second year of implementation.

Proposed Budget

The 2012-2013 proposed budgets for the Residential K-12 Education Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential K-12 Education Program Budget

	2012	2013
Incentives	\$0	\$33,333
Program Delivery	\$0	\$30,107
Program Marketing	\$0	\$0
Utility Program Administration	\$3,997	\$4,117
Evaluation	\$160	\$2,702
Total Program Cost	\$4,157	\$70,259

Cost Effectiveness

Staff's review of the benefits and costs associated with the proposed new Residential K-12 Education Program found that the education program is cost-effective. In the analysis, Staff utilized UNS Gas' energy savings estimates which assumed installation of the low flow shower head (21 therm savings annually), kitchen aerator (34 therm savings annually), and a furnace whistle (7 therm savings annually). The savings estimates also took into consideration water savings benefits from the installation of a low flow shower head and a kitchen aerator.

Measure	# of Kits	Present Value DSM Savings	Present Value DSM Cost	Benefit/Cost Ratio
K-12 Education Program	1,000	\$182,483.41*	\$75,015.30	2.43

*Total participation was estimated at 50% of the total number of kits distributed.

Recommendations

UNS Gas' analysis submitted with its original application indicated the Company had calculated a measure level Societal Cost Test ratio for the Residential K-12 Education Program of 18.7. Staff's analysis led to the benefit-cost ratio indicated in the table above. Variances in

the results can be pinpointed to the fact that Staff's analysis includes the Program Level Non-Incentive Costs into the cost per unit at the measure level. UNS Gas did not include program costs in its Societal Cost Test analysis. Staff also included the cost of the shower head, kitchen aerator, and the furnace whistle as an implementation cost rather than an incentive cost as UNS Gas did. In addition, Staff utilized a calculated after-tax cost of capital as the discount rate for UNS Gas equal to 6.99% based on data from UNS Gas' last rate case (Decision No. 73142 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate. The avoided natural gas cost used in Staff's calculation was based on index pricing provided by UNS Gas dated May 18, 2012. UNS Gas' original application utilized avoided costs for UNS Gas as of August 4, 2010.

Given the results of Staff's cost-benefit analysis, Staff recommends approval of the Residential K-12 Education Program.

G. Residential and Commercial Programs: Solar Water Heating

UNS Gas is requesting budget approval to implement a Residential and Commercial Solar Thermal Water Heating Program. The Solar Thermal Water Heating Program would be offered to existing residential customers, residential new construction customers, and existing and new small commercial customers.

Current Program

This is a new program and does not replace or modify any current program.

Proposed Changes

UNS Gas is requesting to implement a solar thermal water heating program which offers incentives to participating customers on qualified solar thermal systems upon proof of purchase and after the system is installed and operational. To qualify, a system must be listed by the Solar Rating Certification Council ("SRCC") and have OG-300 certification. Typically, customers in the UNS Gas service territory own and operate either conventional gas or electric storage water heaters. These water heating systems can be very energy inefficient. However, consumers are reluctant to change water heating systems due to capital constraints or lack of awareness of more energy efficient options. UNS Gas is proposing to remove barriers to the installation of solar thermal water heating and increase customer acceptance and program participation by allowing customers to receive the incentive themselves or choose to assign the incentive payment directly to the installer, thus reducing initial out-of-pocket investments. All UNS Gas customers who are property owners of existing residential or small commercial facilities, new home builders, and commercial property developers are eligible for this program.

UNS Gas plans to maximize opportunities for program coordination with other approved UNS Gas energy efficiency programs and with any electric utility energy efficiency programs in place to maximize benefits while minimizing promotional costs. The Company will also utilize trained and qualified trade allies to inform and educate residential and commercial customers about more efficient water heating technologies. The program has been designed to offer average incentive dollars equal to \$699 per home for existing residential customers for up to 200 customers; incentive dollars equal to \$699 per home for residential new construction for up to 50 customers; and incentive dollars equal to \$400 per panel for up to 50 existing commercial

retrofits; and incentive dollars equal to \$400 per panel for up to 50 commercial new constructions.

Proposed Budget

The 2012-2013 proposed budgets for the Residential and Commercial Solar Thermal Water Heating Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Solar Thermal Water Heating Program Budget

	2012	2013
Incentives*	\$0	\$207,237
Program Delivery	\$17,204	\$17,720
Program Marketing	\$688	\$8,198
Utility Program Administration	\$7,994	\$8,234
Evaluation	\$1,035	\$8,856
Total Program Cost	\$26,921	\$250,244

*2013 Proposed Incentives Budget was increased \$20,000 by the Company to cover incentives not included in the original filing for Commercial New Construction.

Cost Effectiveness

Solar Thermal Water Heating is considered a RET. According to A.A.C. R14-2-2504.A., RET programs are approved as part of the GEES. Energy savings from RET programs expressed in therms or equivalent therms may be included toward meeting the energy saving goal. Staff completed a cost-benefit analysis of the Solar Thermal Water Heating Program examining the accuracy of the information and the economic feasibility of extending ratepayer dollars to support such a program. The result of that analysis indicated that the Solar Thermal Water Heating Program is not cost-effective at this point in time. However, as a RET program within the GEES, the program is not required to lead to a benefit-to-cost ratio greater than one to be implemented as part of an energy efficiency program.

Recommendations

Staff recognizes that reduced energy consumption from water heating may represent significant savings potential for UNS Gas' Energy Efficiency Portfolio and getting UNS Gas even closer to the required standards under GEES. Staff recommends the Solar Thermal Water Heating Program for approval under the following conditions:

- UNS Gas proposed as part of the Solar Thermal Water Heating Program that the Company will monitor incentives paid to customers for the same system from both the gas and the electric utility and that the maximum utility incentive that would be paid would be no more than 85% of the installed cost of the system requiring that customers pay at least 15% of the system installed cost. Staff does not agree that a customer should be able to collect an incentive from both the electric and natural gas utility for the same installation of a Solar Thermal Water Heater. Incentives are not designed for the customer to get up to 85% of the installation of the equipment paid for by regulated utilities. Staff recommends that for areas of its system where the electric utility also

offers an incentive for the installation of a Solar Thermal Water Heater that UNS Gas coordinate with the associated utility prior to payment of an incentive to insure that a customer does not receive incentive dollars from both utilities.

- For those instances where UNS Gas is the utility paying the incentive to the customer for the Solar Thermal Water Heater, Staff recommends that the incentive not exceed 50% of the installed cost of the system (comparable with the incentive cap set for Southwest Gas with its Solar Water Heating Program).
- UNS Gas will work with the associated electric utility in the service territory to insure that the energy savings resulting from the installation of a RET are not double-counted by both utilities to meet the required energy efficiency standards but rather is counted only by the utility paying the incentive dollars for the system.
- UNS Gas will also incorporate into its DSM Portfolio Savings Reports details as to how many Solar Thermal Water Heaters were installed and whether UNS Gas was the utility paying the incentive and reporting the associated energy savings from each installation.

H. C&I Facilities Programs: Cooking, HVAC, Water Heating

UNS Gas is requesting budget approval to continue the C&I Facilities program plus approval for adding 21 additional measures. UNS Gas is also requesting to modify the delivery of the program to a direct install program similar to what was approved as a Small Business Program for TEP in Decision No. 70457 (August 6, 2008) and the C&I Facilities Program for UNS Electric approved in Decision No. 70524 (September 30, 2008).

Current Program

This program was approved by the Commission in Decision No. 70180 (February 27, 2008). The program was established with incentives for specific energy efficiency measures in existing commercial and industrial facilities being paid directly to customers. The program is designed to promote the installation of high-efficiency, gas-fueled equipment and systems at existing commercial and industrial facilities within the UNS Gas service area. Current approved measures within the C&I Facilities program include: High Efficiency Space Heating Hot Water Boiler <300 kBtuh, High Efficiency Space Heating Hot Water Boiler ≥300 kBtuh, High Efficiency Furnace <300,000 Btuh (AFUE > 92), High Efficiency Furnace <300,000 Btuh (AFUE > 95), Storage Water Heater >75,000 Btuh, High Efficiency Griddle, and Storage Water Heater <75,000 Btuh. Overall participation in the program has been low. According to the Annual DSM Progress Report for January through December 2011 filed in April 2012, 15 customers participated in this program in 2011. The energy savings goal of 95,000 therms in 2011 was reached and exceeded as the program recorded 195,820 therm savings. However, significant barriers exist which prevent higher participation levels such as the economic climate pushing for reduced spending when possible rather than increased incremental costs which may occur with the purchase of more energy-efficient equipment.

Proposed Changes

UNS Gas is requesting to continue the current measures offered as part of the C&I Facilities program and expand the program to include 21 new measures. The Company is also requesting a revamp of how the program is delivered. The proposed changes include average incentive levels of 75% of the incremental cost being paid directly to the contractor rather than

incentives paid to the customer. This program delivery method has worked well for TEP and UNS Electric, and UNS Gas believes the change will remove barriers that are currently limiting participating in the program as customers will only be required to pay the amount of the retro-fit that is not covered by utility incentives. In addition, UNS Gas is also requesting to remove the \$8,000 incentive caps for C&I customers and the \$25,000 incentive cap per school district as these incentives have proven to be more of a disincentive to participation.

The new measures proposed by UNS Gas are listed in the table below along with estimated average incentives per unit and the number of units expected for participation.

C&I Facilities Program Proposed New Measures		
Measure	Average Incentive \$ per unit	Estimated # of Units
High Efficiency Space Heating Steam Boiler	\$1,800	10
High Efficiency Fryer	\$900	15
High Efficiency Large Vat Fryer	\$900	15
High Efficiency Combination Oven	\$1,000	10
High Efficiency Convection Oven	\$1,000	10
High Efficiency Conveyor Oven (<25")	\$400	10
High Efficiency Conveyor Oven (>25")	\$900	10
High Efficiency Single Rack Oven	\$1,000	10
High Efficiency Double Rack Oven	\$1,000	10
High Efficiency Energy Star Steam Cooker	\$1,750	10
Condensing Unit Heater	\$400	10
Power Vented Unit Heater	\$2,000	10
Programmable Thermostats	\$100	50
High Efficiency Pool and Spa Heater (<500 kBtuh)	\$150	5
Low-Flow Pre-Rinse Spray Valve	\$50	50
Commercial/Multifamily Clothes Washer CEE Tier 1	\$75	50
Commercial/Multifamily Clothes Washer CEE Tier 2	\$75	50
Commercial/Multifamily Clothes Washer CEE Tier 3	\$75	50
Steam Trap Survey and Replacement Commercial	\$250	30
Steam Trap Survey and Replacement Industrial	\$250	25
Custom Measures*	\$2,700	5

*Custom incentive is based on a projection of covering 75% of the incremental cost for a typical custom project and is equivalent to \$2,700 based on first year savings.

The proposed changes to the program mean that it will be operated as an "up-stream" market program where the incentives are offered directly to the qualified contractor who will then provide installation services to customers. The program will also include promotion and education material designed to provide decision makers in the small business arena with necessary data to make informed decisions.

Proposed Budget

The 2012-2013 proposed budgets for the C&I Facilities Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed C&I Facilities Program Budget

	2012	2013
Incentives	\$18,500	\$303,250
Program Delivery	\$215,877	\$441,693
Program Marketing	\$11,719	\$74,494
Utility Program Administration	\$3,997	\$8,234
Evaluation	\$10,004	\$33,107
Total Program Cost	\$260,096	\$860,778

Cost Effectiveness

Staff's review of the benefits and costs associated with the proposed new measures in the C&I Facilities Program found that several of the new measures are not cost-effective at this point in time. As stated earlier, with the current depressed natural gas prices, the benefits in terms of therm and capacity savings do not necessarily outweigh the costs associated with the measures. Staff's benefit-cost analysis is presented in the table below.

Measure	Units	Present Value DSM Savings	Present Value DSM Cost	Benefit / Cost Ratio
High Efficiency Space Heating Steam Boiler	10	\$30,804.15	\$35,909.64	0.86
High Efficiency Fryer	15	\$16,957.33	\$16,524.48	1.03
High Efficiency Large Vat Fryer	15	\$20,160.38	\$18,842.92	1.07
High Efficiency Combination Oven	10	\$12,655.19	\$13,620.99	0.93
High Efficiency Convection Oven	10	\$9,609.15	\$11,006.65	0.87
High Efficiency Conveyor Oven (<25")	10	\$23,080.81	\$17,492.50	1.32
High Efficiency Conveyor Oven (>25")	10	\$26,535.08	\$21,622.60	1.23
High Efficiency Single Rack Oven	10	\$32,470.15	\$26,804.71	1.21
High Efficiency Double Rack Oven	10	\$66,353.41	\$55,847.90	1.19
High Efficiency Energy Star Steam Cooker	10	\$48,202.79	\$41,547.59	1.16
Condensing Unit Heater	10	\$15,154.82	\$19,353.47	0.78
Power Vented Unit Heater	10	\$58,873.40	\$71,129.35	0.83
Programmable Thermostats	50	\$7,181.01	\$9,791.84	0.73
High Efficiency Pool and Spa Heater (<500 kBtuh)	5	\$1,067.72	\$958.63	1.11
Low-Flow Pre-Rinse Spray Valve	50	\$3,013.51	\$2,374.27	1.27
Commercial/Multifamily Clothes Washer CEE Tier 1	50	\$27,046.23	\$7,412.55	3.65
Commercial/Multifamily Clothes Washer CEE Tier 2	50	\$32,854.71	\$9,293.98	3.54

Commercial/Multifamily Clothes Washer CEE Tier 3	50	\$35,132.86	\$19,821.15	1.77
Steam Trap Survey and Replacement Commercial	30	\$11,200.57	\$11,476.52	0.98
Steam Trap Survey and Replacement Industrial	25	\$42,841.52	\$31,176.38	1.37
Custom Measures	5	\$36,260.85	\$28,681.71	1.26

Recommendations

UNS Gas' analysis submitted with its original application indicated the Company had calculated a measure level Societal Cost Test ratio for each of the new measures as detailed below. Variances in the results can be pinpointed to analysis differences including the fact that Staff's analysis includes the Program Level Non-Incentive Costs into the cost per unit at the measure level. UNS Gas did not include program costs in its Societal Cost Test analysis. Staff also utilized a calculated after-tax cost of capital as the discount rate for UNS Gas equal to 6.99% based on data from UNS Gas' last rate case (Decision No. 73142 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate. The avoided natural gas cost used in Staff's calculation was based on index pricing provided by UNS Gas dated May 18, 2012. UNS Gas' original application utilized avoided costs for UNS Gas as of August 4, 2010. Staff also included monetized water and electricity benefits when applicable based on energy/water savings provided by UNS Gas.

Measure	Staff Benefit/Cost Ratio	UNS Gas Societal Cost Test
High Efficiency Space Heating Steam Boiler	0.86	1.9
High Efficiency Fryer	1.03	1.6
High Efficiency Large Vat Fryer	1.07	1.8
High Efficiency Combination Oven	0.93	1.4
High Efficiency Convection Oven	0.87	1.1
High Efficiency Conveyor Oven (<25")	1.32	7.1
High Efficiency Conveyor Oven (>25")	1.23	3.6
High Efficiency Single Rack Oven	1.21	3.8
High Efficiency Double Rack Oven	1.19	5.5
High Efficiency Energy Star Steam Cooker	1.16	3.2
Condensing Unit Heater	0.78	2.4
Power Vented Unit Heater	0.83	2.4
Programmable Thermostats	0.73	1.2
High Efficiency Pool and Spa Heater (<500 kBtuh)	1.11	1.4
Low-Flow Pre-Rinse Spray Valve	1.27	3.9
Commercial/Multifamily Clothes Washer CEE Tier 1	3.65	3.6
Commercial/Multifamily Clothes Washer CEE Tier 2	3.54	3.7
Commercial/Multifamily Clothes Washer CEE Tier 3	1.77	2.0
Steam Trap Survey and Replacement Commercial	0.98	1.6
Steam Trap Survey and Replacement Industrial	1.37	8.1
Custom Measures	1.26	3.3

The last approved budget for this program was in Decision No. 70180 equal to \$218,545 for 2011. The proposed budget for this program is \$260,096 which represents an increase of \$41,551 or roughly a 19% increase.

Staff recommends approval of all of the measures except: High Efficiency Space Heating Steam Boiler, High Efficiency Combination Oven, High Efficiency Convection Oven, Condensing Unit Heater, Power Vented Unit Heater, and Programmable Thermostats. For Staff's recommended measures, Staff did not monetize the environmental benefits associated with the proposed measures but recognizes that there are benefits to the environment from the implementation of the proposed measures. When taking into consideration those environmental benefits, Staff recommends approving the Steam Trap Survey and Replacement Commercial as an additional measure to the C&I program.

After considering the low participation levels for this program and the proven success of the direct install methodology, Staff recommends that UNS Gas be allowed to implement a direct install design whereby 75% of the incremental cost is being paid directly to the contractor rather than incentives paid to the customer. UNS Gas also requested the removal of the \$8,000 incentive cap for C&I customers and the \$25,000 incentive cap per school district. After reviewing the approval of these caps with Decision No. 70180, Staff is concerned that a removal of the incentive cap would lead to several larger commercial and industrial customers receiving the majority of the budgeted incentive dollars. However, Staff recognizes that with the increased number of measures available, the incentive cap is more likely to be reached sooner than with the limited number of measures available prior to this filing. Staff recommends increasing the incentive cap for C&I customers to \$16,000 and increasing the incentive cap per school district to \$50,000.

I. Multifamily Programs: Direct Install

UNS Gas is requesting budget approval to implement a new Multifamily Direct Install program to its current energy efficiency portfolio. This program is designed to encourage energy efficiency upgrades in the multifamily buildings of five or more units. Three measures have been proposed as part of the new Multifamily Direct Install Program: Low Flow Shower Heads (1.5 GPM), Kitchen Faucet Aerators (1.5 GPM), and Bathroom Faucet Aerators (1 GPM).

Current Program

This is a new program and does not replace or modify any current program.

Proposed Changes

Multifamily housing represents a vast opportunity for energy efficiency potential; however, this segment also brings with it substantial barriers to implementing energy efficiency programs such as lack of capital and lack of awareness of the benefits to energy efficiency upgrades. UNS Gas believes the 2-4 unit market segment is best served by its Residential Existing Homes Program. At the same time the 5+ multifamily housing market segment can be reached by both the C&I Facilities Program and this new Multifamily Direct Install Program.

The program would be structured such that delivery will occur through direct installation of selected low cost energy efficiency improvements in existing complexes. The program would

be open to all existing multifamily housing complexes and new construction projects within the UNS Gas service area with five dwelling units or more. All UNS Gas customers who are property owners of existing residential multifamily complexes or developers of new complexes with five or more dwelling units would be eligible for the program.

The program is designed so that delivery would be through a direct installation effort of the faucet aerators and low flow shower heads. The installation would be at no cost to the owner as the program itself would pay for the full cost of the product installation. The installation would be completed by either the facility's existing maintenance personnel or through a program authorized installation contractor.

UNS Gas will market the program via communications with apartment managers and owners including options such as direct outreach, local newspapers and radio, and bill inserts. UNS Gas will also work with contractors and industry specialists to communicate the new program. The Company anticipates that property managers will take advantage of the offer and donate the labor to install the energy efficient devices.

Proposed Budget

The 2012-2013 proposed budgets for the Multifamily Direct Install Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Multifamily Direct Install Program Budget

	2012	2013
Incentives	\$0	\$11,249
Program Delivery	\$47,204	\$103,783
Program Marketing	\$944	\$4,601
Utility Program Administration	\$0	\$4,117
Evaluation	\$1,926	\$4,950
Total Program Cost	\$50,074	\$128,700

Cost Effectiveness

Staff's review of the benefits and costs associated with the proposed new measures in the Multifamily Direct Install Program found that the Kitchen Faucet Aerator measure is cost-effective while the Low Flow Shower Head and Bathroom Faucet Aerator are not cost-effective at this point in time. Staff's benefit-cost analysis is presented in the table below.

Measure	Units	Present Value DSM Savings	Present Value DSM Cost	Benefit/Cost Ratio
Low Flow Shower Head	275	\$51,182.55	\$65,627.74	0.78
Kitchen Faucet Aerator	275	\$27,303.04	\$22,957.80	1.19
Bathroom Faucet Aerator	275	\$15,246.54	\$21,191.82	0.72

Recommendations

UNS Gas' analysis submitted with its original application indicated the Company had calculated a measure level Societal Cost Test ratio for the three new measures as 8.6 for the Low Flow Shower Head, 36.6 for the Kitchen Faucet Aerator, and 33.8 for the Bathroom Faucet Aerator. Staff's analysis led to the benefit-cost ratios indicated in the table above. Variances in the results can be pinpointed to differences including the fact that Staff's analysis includes the Program Level Non-Incentive Costs into the cost per unit at the measure level. UNS Gas did not include program costs in its Societal Cost Test analysis. Staff also utilized a calculated after-tax cost of capital as the discount rate for UNS Gas equal to 6.99% based on data from UNS Gas' last rate case (Decision No. 73142 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate. The avoided natural gas cost used in Staff's calculation was based on index pricing provided by UNS Gas dated May 18, 2012. UNS Gas' original application utilized avoided costs for UNS Gas as of August 4, 2010.

Given the results of Staff's cost-benefit analysis, Staff does not recommend implementation of the new Multifamily Direct Install Program with only one measure, the Kitchen Faucet Aerator. Staff recommends the Company revisit filing to implement this program at such time as when natural gas prices have increased leading to a higher value in savings from the proposed measures.

J. Support Program: Education and Outreach

UNS Gas is requesting budget approval to add this program to the UNS Gas energy efficiency portfolio.

Current Program

This is a new program and does not replace or modify any current program.

Proposed Changes

UNS Gas believes that to further its ability to meet overall performance goals in energy savings, its customers must understand the concept of energy efficiency and embrace those concepts. To meet this goal, UNS Gas is proposing to implement a new Education and Outreach program designed to encourage higher levels of participation in DSM programs. The Company will strive to educate residential and commercial customers on how to conserve energy and in turn lower their gas utility bills. UNS Gas will strive to educate customers about their energy use decisions, actions, and options for increasing energy efficiency through the new Education and Outreach Program.

The education of consumers about their energy use would occur through a variety of avenues such as: bill messages, website interaction through uesaz.com, UNS Gas customer care representatives will be knowledgeable about energy efficiency issues, bill inserts, email newsletters, and even participation at fairs and other local events. The intention behind the program is to help customers understand and embrace the concept of DSM and to encourage higher levels of participation in the DSM programs offered. This program would support all DSM program marketing and advertising efforts.

All UNS Gas residential and commercial customers will be eligible for this program. In addition, UNS Gas' existing "Bright" energy efficiency marketing platform will still be used to keep in touch with customers via social media such as Facebook and Twitter.

Proposed Budget

The 2012-2013 proposed budgets for the Education and Outreach Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Education and Outreach Program Budget

	2012	2013
Incentives	\$0	\$0
Program Delivery	\$25,735	\$61,813
Program Marketing	\$0	\$0
Utility Program Administration	\$3,997	\$8,234
Evaluation	\$0	\$2,802
Total Program Cost	\$29,731	\$72,849

Cost Effectiveness

Staff's review of this program did not include completing a cost-benefit analysis since this is an education program, there is not a calculation for energy savings.

Recommendations

UNS Gas is requesting approval to recover the cost of the program through the DSMS but will not have accompanying direct energy savings from this program. Staff agrees with UNS Gas that the program will directly benefit other DSM programs by increasing awareness of those programs and ultimately increasing participation in those programs. Staff recommends approval of the Education and Outreach Program as a new program offered in the UNS Gas energy efficiency portfolio.

K. Support Programs: Codes Support

UNS Gas is requesting budget approval to add this pilot program to the UNS Gas energy efficiency portfolio.

Current Program

This is a new program and does not replace or modify any current program.

Proposed Changes

UNS Gas is requesting to implement a pilot Energy Codes Support Program ("ECSP") designed to increase energy savings in new construction and renovated buildings in both the residential and commercial segments to improve compliance levels with building codes and establish a process passing on periodic energy code updates. The Company recognizes that building energy codes are a simple cost-effective way of achieving energy savings; however, the Company also recognizes that many energy code officials lack the time and resources to enforce those codes. In addition, building design professionals may not be well informed of energy code

requirements. UNS Gas believes that the ECSP will reduce energy consumption and assist in improving compliance with existing and future energy codes.

This program will be open to all new construction and existing facilities that receive gas service from UNS Gas. All UNS Gas customers who are property owners of existing residential or small commercial facilities, new home builders, and commercial property developers can take part in this program. To reach this audience with the energy codes message, UNS Gas will hold trainings for local code officials and building design professionals to promote code compliance. UNS Gas will also keep apprised of changes and market trends in energy codes and pass that information on to local groups responsible for energy code compliance and enforcement.

In addition, the ECSP will facilitate energy savings through adoption of codes where they currently don't exist and act as an advocate for energy code updates over time. The program will also provide support to local jurisdictions through such activities as: classroom training sessions/brown bag training sessions/field training sessions for code officials and building professionals, purchasing energy code books for officials and supporting energy code certifications. UNS Gas will also coordinate activities with the Southwest Energy Efficiency Project ("SWEEP") to support research on and adoption of building codes and equipment standards.

Proposed Budget

UNS Gas has proposed one-quarter of a full-time equivalent staff person at a middle management level and one-quarter of a full-time equivalent of a junior staff person to implement this program. The 2012-2013 proposed budgets for the Energy Codes Support Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Energy Codes Support Program Budget

	2012	2013
Incentives	\$0	\$0
Program Delivery	\$0	\$60,095
Program Marketing	\$0	\$9,014
Utility Program Administration	\$0	\$4,117
Evaluation	\$0	\$2,929
Total Program Cost	\$0	\$76,155

Cost Effectiveness

Staff's review of this program did not include completing a cost-benefit analysis since this is an education program, there is not a calculation for energy savings.

Recommendations

UNS Gas is requesting to implement this program fully in year two of this EE Plan. An integrated evaluation approach will be taken to develop savings methodologies for estimating savings from the implementation of more stringent energy code adoption and increase energy

code compliance. UNS Gas will propose a calculation methodology to gauge energy savings from energy code adoption to the Commission.

Staff agrees with UNS Gas' assessment that energy savings can be achieved through the adherence to energy codes. Staff also understands that these codes vary widely across the state of Arizona and that education on what the codes are is key to implementation. Staff recommends approval of the ECSP.

BUDGET

UNS GAS, INC.					
2011-2012-2013 EE BUDGET					
	Actuals	UNS Proposed	UNS Proposed	Staff Proposed	Staff Proposed
	2011	2012	2013	2012	2013
Residential Programs					
Existing Homes	\$564,125	\$632,784	\$1,204,061	\$616,873	\$1,152,534
New Construction	\$47,328	\$152,718	\$140,932	\$152,718	\$140,932
Low Income Weatherization	\$201,500	\$340,191	\$350,397	\$240,191	\$247,397
Energy Financing	\$16,917	\$136,663	\$505,917	\$136,663	\$505,917
Home Energy Reports	\$0	\$22,204	\$128,105	\$0	\$0
Behavioral Comprehensive (K-12)	\$0	\$4,157	\$70,259	\$4,157	\$70,259
Non-Residential Programs					
C&I Facilities	\$114,484	\$260,096	\$860,778	\$213,387	\$685,988
Multifamily Direct Install	\$0	\$50,074	\$128,700	\$0	\$0
Both Residential & Non-Residential Programs					
Solar Thermal Water Heating	\$0	\$26,921	\$250,244	\$26,921	\$250,244
Support Programs					
Education & Outreach	\$0	\$29,731	\$72,849	\$29,731	\$72,849
Codes Support		\$0	\$76,155	\$0	\$76,155
Program Development, Analysis, Reporting Software*	\$134,451	\$115,034	\$118,485	\$115,034	\$118,485
Baseline Study	\$7,046	\$0	\$0	\$0	\$0
Total Program Cost Per Year (Budget)	\$1,085,851	\$1,770,573	\$3,906,882	\$1,535,675	\$3,320,760
Accumulated Cost 2012-2013 (Budget)		\$1,770,573	\$5,677,455	\$1,535,675	\$4,856,435

*Program Development, Analysis, Reporting Software costs are allocated across all programs for benefit-cost analysis purposes.

The above table details UNS Gas' proposed energy efficiency budget for 2012 and 2013 and Staff's recommended budget which removes funding for those programs not cost-effective. Staff's proposed budget for 2012 represents an increase of approximately \$450,000 or a 41% increase over 2011 actuals. Staff's proposed budget for 2013 represents an increase of approximately \$1.8 million which is just slightly more than double the budget for 2012. Given the number of new measures UNS Gas is proposing that have a benefit-cost ratio greater than one, Staff recommends approval of the Staff-proposed budget as stated above.

Given that a few of the new measures proposed by UNS Gas were not considered cost-effective at this point in time, Staff has adjusted the projected savings UNS Gas may reach in 2012 and 2013 below.

PROJECTED ENERGY EFFICIENCY SAVINGS (with recommended measures)				
	2010	2011	2012	2013
Actual/Projected Sales (therms)	140,222,684	139,990,850	155,214,185	157,644,118
Required Savings (%)		0.50%	1.20%	1.80%
Required Savings From Prior Year Sales (therms)		701,113	1,679,890	2,793,855
Energy Efficiency Programs Savings (therms)		281,203	107,820	401,688
Renewable Energy Technology Programs Savings (therms)		0	0	33,447
Total Savings (therms)		281,203	107,820	435,136
Total Cumulative Savings (therms)		281,203	389,023	824,159
Savings (%)		0.201%	0.278%	0.531%
Difference Between Required Savings and Projected/Actual Savings (therms)		419,910	1,290,867	1,969,697

BUDGET SHIFTING

UNS Gas has requested the ability to shift up to 50 percent of its approved funds from residential to non-residential sector programs, or from non-residential to residential sector programs, based on program activity. The Company has also requested that it be allowed to increase the total budget for the energy efficiency programs by up to 25 percent, where cost-effective. The Company states that this type of flexibility maximizes participation in successful programs and allows it to continue accepting applications from customers in cases where an individual program may be over-subscribed.

While the Commission has allowed utilities to shift energy efficiency program funding among programs or measures within the residential sector, or among programs or measures within the non-residential sector, recent practice has been to limit shifting from sector to sector, to ensure that both residential and non-residential customers have reasonable opportunity to

participate in energy efficiency programs. Allowing funding shifts among programs or measures within a sector allows a reasonable degree of flexibility, but ensures reasonable access to participation in energy efficiency programs for both residential and non-residential customers.

When considering the proposed budget that Staff is recommending includes a 41% increase in budget dollars for 2012 and an almost doubling of budget for 2013, Staff believes that a reasonable amount of flexibility has already been incorporated into the 2012 and 2013 proposed budget. Staff recommends that UNS Gas be allowed to shift funds (up to 25% of the program's budgeted funds) between measures and programs within each customer segment but not be allowed to shift funds between residential and non-residential segments (with the exception that budgeted dollars for LIWP should not be allocated to other programs). Staff agrees with UNS Gas that it is helpful for utilities to have the flexibility to increase budget slightly if necessary to maximize participation. Given the increase in the overall budget as stated above, Staff recommends that UNS Gas be allowed to increase the total budget for the energy efficiency programs by up to 5 percent, where cost-effective.

MEASUREMENT, EVALUATION, AND RESEARCH ("MER")

In its original application, UNS Gas requested that the reporting requirements outlined in A.A.C. R14-2-2509 supersede the reporting requirements detailed in Decision No. 70011 dated November 27, 2008. Currently, UNS Gas is required to file its DSM surcharge filing on April 1st each year (with the surcharge taking effect June 1st of each year) and its semi-annual DSM reports on March 1st and September 1st of each year. A.A.C. R14-2-2509 outlines that specific DSM reports be filed April 1st and October 1st of each year.

Staff agrees that in order to avoid confusion and duplicative filings, the reporting requirements detailed in A.A.C. R14-2-2509 supersede those reporting requirements outlined in Decision No. 70011 so that UNS Gas would be required to file DSM reports on April 1st and October 1st of each year.

DSMS

For 2012 and 2013, UNS Gas is proposing to recover \$5.9 million through the DSMS. With the updated budget and surcharge filing on September 6, 2011, UNS Gas has requested a DSMS of \$0.0283 per therm. The current DSMS is \$0.0084 per therm. This change to the DSMS represents an increase of \$0.0199 per therm. The average total increase to a residential customer for the proposed DSMS with the full budget proposed by the Company is approximately \$0.90 per month.

In order to propose a DSMS that is most reflective of the Company's current position, Staff requested updated DSM balance (as of June 2012) information and projected sales for 2013. The updated balance and therms can be seen in the table below along with Staff's calculation of the proposed DSMS (with the reduced budget for measures not cost-effective) and the impact to a residential customer bill.

DEMAND SIDE MANAGEMENT SURCHARGE		
STAFF PROPOSED 2012-2013 PLAN CALCULATION		
(a)	Total Therm Sales (Including CARES):*	161,987,593
(b)	Less CARES Sales Forecast:	4,123,889
(a) – (b) = (c)	Total Therms Applicable to Surcharge	157,863,704
	Total Budget	\$3,320,760
	Carry-Over DSM Balance	\$630,931
(d)	Total DSM Cost to be Recovered	\$2,689,829
(d) / (c) = (e)	Staff Proposed Surcharge (per therm)	\$0.0170
(f)	Current Surcharge (per therm)	\$0.0084
(g)	Average Residential Monthly Usage (therms)	45
(f) x (g) = (h)	Surcharge \$ Collected (Current Surcharge)	\$0.3780
(e) x (g) = (i)	Surcharge \$ Collected (Proposed Surcharge)	\$0.7668
(i) – (h)	Staff Monthly Bill Impact for Residential Customers	\$0.3888

*Total therm sales for purposes of calculating the surcharge include all customer volumes including transport customers. Therm sales reported for purposes of meeting the GEES do not include transport only customers.

WAIVER REQUEST

In its original application, UNS Gas indicated that it would make all efforts to meet the 2011 EE Standard target of 0.50% of prior year sales. Actual 2011 savings were 0.201%. Given the result for 2011 and the time that has passed in implementing a new energy efficiency plan with additional measures, UNS Gas has requested a waiver of the GEES in A.A.C. R14-2-2504.B. Specifically in its September 2011 filing, UNS Gas has requested a modification of the GEES as detailed in the table below.

Requested Waiver To Standard		
Calendar Year	Cumulative Energy Efficiency Standard (Current)	Cumulative Energy Efficiency Standard (UNS Gas Requested Modification)
2011	0.5%	0.08%
2012	1.2%	0.61%
2013	1.8%	1.20%
2014	2.4%	1.80%
2015	3.0%	2.40%
2016	3.6%	3.00%
2017	4.2%	3.60%
2018	4.8%	4.20%
2019	5.4%	4.80%
2020	6.0%	5.40%

Staff recognizes UNS Gas' efforts in implementing cost-effective energy efficiency programs that are beneficial to all customer classes. Staff also realizes that the current market dominated with low natural gas prices leads to difficulty in finding cost-effective options to save on natural gas usage. UNS Gas has an established energy efficiency program and has provided new measures for increasing the opportunity for energy savings. However, Staff believes that UNS Gas should continue to strive to hit the established GEES each year. Staff recommends a waiver be granted to UNS Gas of the GEES Standards established in A.A.C. R14-2-2504.B for the calendar years 2012 and 2013. Waivers of future years' requirements can be evaluated during future years' implementation plan reviews.

Staff recommends that UNS Gas implement its plan as modified by Staff above for the remainder of 2012 and all of 2013 calendar years and be required to file its next energy efficiency plan no later than June 1, 2013 pursuant to A.A.C. R14-2-2505. Also, as indicated above, Staff recommends that A.A.C. R14-2-2509 supersede those reporting requirements outlined in Decision No. 70011 so that UNS Gas would be required to file DSM reports on April 1st and October 1st of each year.

In addition, Staff recommends that the UNS Gas EE Plan filed in compliance with A.A.C. R14-2-2505 be considered sufficient in meeting the requirements of R14-2-313.

Staff also recommends that UNS Gas revise Exhibit 3 (Clean Version and Redlined Version) from its September 6, 2011 filing, the Demand Side Management Surcharge (DSMS) tariff – Rider R-2, so that the tariff is consistent with the terms of the Commission's Decision. This tariff should be submitted to Docket Control within 30 days of the effective date of this Decision.

A handwritten signature in black ink, consisting of several overlapping, sweeping strokes that form a stylized, elongated shape.

Steven M. Olea
Director
Utilities Division

SMO:RSP:sms/WVC

ORIGINATOR: Ranelle Paladino

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BEFORE THE ARIZONA CORPORATION COMMISSION

GARY PIERCE
Chairman
BOB STUMP
Commissioner
SANDRA D. KENNEDY
Commissioner
PAUL NEWMAN
Commissioner
BRENDA BURNS
Commissioner

IN THE MATTER OF THE APPLICATION)
OF UNS GAS, INC. FOR APPROVAL OF)
ITS GAS ENERGY EFFICIENCY)
IMPLEMENTATION PLAN FOR 2011 AND)
2012)

DOCKET NO. G-04204A-11-0149
DECISION NO. _____
ORDER

Open Meeting
November 7 and 8, 2012
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

INTRODUCTION

1. UNS Gas, Inc. ("UNS Gas" or the "Company") is certificated to provide natural gas service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission ("Commission").
2. On April 4, 2011, UNS Gas filed an application with the Commission requesting approval of its 2011-2012 Gas Energy Efficiency Implementation Plan ("EE Plan") and a change to its Demand-Side Management ("DSM") Surcharge ("DSMS").
3. On September 6, 2011, UNS Gas filed updated information applicable to its EE Plan. Specifically, UNS Gas updated the budget information and portfolio savings filed in its original application. UNS Gas also filed to update the DSMS that was filed in its original application and requested a waiver and modification of the Gas Energy Efficiency Standards

1 (“GEES”), pursuant to A.A.C. R14-2-2520, and the Cumulative Energy Efficiency Standard set
2 forth in A.A.C. R14-2-2504.B.

3 4. On April 17, 2012, UNS Gas filed an amendment to its original application for its
4 EE Plan to include approval for the 2013 Energy Efficiency Plan (“2013 Plan”). The Company
5 does not plan to propose any changes to the proposed EE Plan programs, budgets, or DSMS
6 previously filed in this docket and requested the Commission waive the requirement for the
7 Company to file a separate 2013 Plan. UNS Gas also filed to modify its previous request for a
8 waiver of the GEES to incorporate a new table outlining the GEES levels the Company believes it
9 can obtain.

10 5. UNS Gas is certificated to provide natural gas service as a public service
11 corporation in the State of Arizona. UNS Gas is a wholly-owned subsidiary of UniSource Energy
12 Services and is engaged in providing natural gas service within portions of Arizona, pursuant to
13 authority granted by the Commission. UNS Gas provides natural gas service in the counties of
14 Apache, Coconino, Mohave, Navajo, Santa Cruz and Yavapai. As of December 2011, the
15 Company had over 147,500 customers. Of that total, approximately 135,050 are Residential
16 customers. The remainder are a mix of Commercial, Industrial, and Municipal customers.

17 **EE PLAN OVERVIEW**

18 6. UNS Gas’ EE Plan contains new programs, enhancements to existing programs,
19 and continued support for already successful programs. The EE Plan is designed to comply with
20 the Commission’s GEES and to provide a framework for future compliance. For the Company’s
21 existing and proposed DSM programs, the EE Plan estimates each program’s total cost and the
22 cost per therm reduction, and explains how these programs comply with the requirements in the
23 GEES. The EE Plan also includes a tariff filing that complies with A.A.C. R14-2-2506.A and
24 includes a request to modify and reset the existing adjustment mechanism for implementation
25 through 2012.

26 7. To implement the EE Plan, UNS Gas is requesting an updated plan budget total of
27 approximately \$5.98 million. With the amended filing on September 6, 2011, UNS Gas is
28 requesting a DSMS of \$0.0283 per therm. The current DSMS is \$0.0084 per therm. The amended

1 filing for the EE Plan represents an increase of \$0.0199 per therm.

2 8. The UNS Gas EE Plan includes the implementation of new programs, changes to
3 current programs, and the continuation of cost-effective DSM programs already in place. Included
4 in the new programs are: Multifamily Direct Install, Behavioral Comprehensive (including Home
5 Energy Reports and K-12 education), Education and Outreach, Codes and Support, and a
6 Renewable Energy Technology ("RET") program for Solar Thermal Water Heating. The
7 Company also is enhancing current programs through the addition of new measures to Existing
8 Homes/Direct Install and Commercial and Industrial ("C&I") Facilities. UNS Gas has also filed to
9 increase eligibility for its existing Low Income Weatherization Program ("LIWP") and to continue
10 administering the Joint Utility Residential New Construction and Energy Efficiency Residential
11 Financing program. The UNS Gas EE Plan includes a mix of programs targeted to multiple
12 customer segments as detailed below.

13 Residential Programs

- 14 • Existing Homes
- 15 • New Construction
- 16 • LIWP
- 17 • Energy Financing
- 18 • Home Energy Reports
- 19 • Behavioral Comprehensive Program
- 20 • Solar Thermal Water Heating (RET)

21 Non-Residential Programs

- 22 • C&I Facilities
- 23 • Multifamily Direct Install
- 24 • Solar Thermal Water Heating (RET)

25 9. UNS Gas is also proposing a new Codes Support program and a new Education and
26 Outreach program applicable to both residential and non-residential customers.

27 10. The EE Plan includes new measures for existing programs in addition to modifying
28 some existing programs, detailed in the table below.

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2011-2012 Proposed Energy Efficiency and Demand Response Program Modifications or Additions

Residential Existing Homes	
HVAC	<ul style="list-style-type: none"> Add a High Efficiency Residential Steam Heating Boiler as an available energy efficiency upgrade.
Water Heating	<ul style="list-style-type: none"> Add Pipe Wrap as an available energy efficiency upgrade. Add High Efficiency Pool and Spa Heaters as available energy efficiency upgrades.
Residential New Construction	
Joint Utility New Home Construction	<ul style="list-style-type: none"> Updated construction standards for builders to Energy Star® Version 3.
Residential LIWP	
Home Weatherization	<ul style="list-style-type: none"> Modify income eligibility from 150% of poverty level to match Low Income Home Energy Assistance Program ("LIHEAP"). Increase the maximum spending per home from \$2,000 to \$3,000.
Residential Energy Financing	
Upgrade Financing	<ul style="list-style-type: none"> Request to continue Pilot Program which provides financing for existing homes wanting to implement more efficient upgrades.
Residential Behavioral Comprehensive Program	
Energy Reports	<ul style="list-style-type: none"> Implement a new Pilot Program comparing energy use of one customer to neighbors or comparable households.
K-12 Education	<ul style="list-style-type: none"> Implement a new program utilizing enthusiasm of kids and the community focal point of schools to push parents to take energy efficiency action.
Residential Solar Water Heating	
Water Heating	<ul style="list-style-type: none"> Implement a new program offering incentives to participating new construction or retrofit customers on qualified solar thermal systems upon proof of purchase after system is installed and operational.
Commercial & Industrial Facilities	
Cooking	<ul style="list-style-type: none"> Add a measure for High-Efficiency Fryers with incentive paid to contractor. Add a measure for High-Efficiency Large Vat Fryers with incentive paid to contractor. Add a measure for High-Efficiency Combination Oven with incentive paid to contractor. Add a measure for High-Efficiency Convection Oven with incentive paid to contractor. Add a measure for High-Efficiency Conveyor Oven <25" with incentive paid to contractor. Add a measure for High-Efficiency Conveyor Oven >25" with incentive paid to contractor. Add a measure for High-Efficiency Single Rack Oven with incentive paid to contractor. Add a measure for High-Efficiency Double Rack Oven with incentive paid to contractor. Add a measure for High-Efficiency Energy Star® Steam Cooker with incentive paid to contractor.
HVAC/Process Heat	<ul style="list-style-type: none"> Add a measure for High-Efficiency Condensing Unit Heaters (131,000-305,000 Btuh) with incentive paid to contractor. Add a measure for Power-Vented Unit Heaters (150,000-300,000 Btuh) with incentive paid to contractor. Add a measure for Programmable Thermostats with incentive paid to contractor. Add a measure for Custom Modifications covering 75% of incremental costs for a custom project equivalent to \$2,700 based on first year savings with incentive paid to contractor. Add a measure for High-Efficiency Space Heating Steam Boilers (>300

	kBtuh) with incentive paid to contractor. <ul style="list-style-type: none"> • Add a measure for Survey and Replacement of Commercial Steam Traps. • Add a measure for Survey and Replacement of Industrial Steam Traps.
Water Heating	<ul style="list-style-type: none"> • Add a measure for High-Efficiency Pool and Spa Heaters (<500 kBtuh) with incentive paid to contractor. • Add a measure for Low-Flow Pre Rinse Spray Valves with incentive paid to contractor. • Add measures for Commercial Multi-Family Clothes Washers CEE Tier 1, 2, and 3.
Multifamily Direct Install	
Water Heating	<ul style="list-style-type: none"> • Implement a new program with a measure for Low Flow Shower Head (1.5 GPM) with incentive paid to contractor. • Implement a new program with a measure for Kitchen Faucet Aerators (1.5 GPM) with incentive paid to contractor. • Implement a new program with a measure for Bathroom Faucet Aerators (1 GPM) with incentive paid to contractor.
Non-Residential Solar Water Heating	
Water Heating	<ul style="list-style-type: none"> • Implement a new program for qualified solar thermal systems new construction and retro-fit Commercial Gas Water Heater with incentive offered upon proof of purchase after system is installed and operational.
Other Support Programs	
Codes Support	<ul style="list-style-type: none"> • Implement a new program to increase energy savings through improving levels of compliance with existing building energy codes and supporting/informing residential and commercial sectors of energy code updates.
Education and Outreach	<ul style="list-style-type: none"> • Implement a new program to provide customers with the tools and knowledge necessary to better manage their energy use including marketing/education on available DSM options and the importance of energy efficiency.

11. The Commission approved the GEES in Decision No. 72042 on December 10, 2010, in Docket No. RG-00000B-09-0428. The rules are designed to cause affected utilities to achieve therm or therm equivalent savings through DSM and RET programs in order to ensure reliable gas service at reasonable rates and costs. As established in these rules, "energy efficiency" means the production or delivery of an equivalent level and quality of end-use gas service using less energy, or the conservation of energy by end-use customers. Energy efficiency is a type of DSM. DSM programs promote materials, devices, technologies, educational programs, practices, or facility alterations designed to result in increased energy efficiency, including combined heat and power used to displace space heating, water heating, or another load. RET programs promote technology applications.

12. The GEES rules outline specific cumulative annual energy savings by calendar year. Under A.A.C. R14-2-2504.B, UNS Gas is required to meet a cumulative annual energy

savings for calendar year 2011 of 0.50% of retail energy sales in the prior year. For 2012, that cumulative annual energy savings is 1.20% of retail energy sales in the prior year. As can be seen on the table below with information based on UNS Gas' most recently filed Annual DSM Progress Report filed on April 2, 2012, UNS Gas reached a cumulative annual EE savings as a percent of previous year's retail sales of 0.20%.

UNS GAS REQUIRED ENERGY EFFICIENCY STANDARDS				
	2010	2011	2012	2013
Actual/Projected Sales (therms)*	140,222,684	139,990,850	155,214,185	157,644,118
Required Savings (%)		0.50%	1.20%	1.80%
Required Savings From Prior Year Sales (therms)		701,113	1,679,890	2,793,855
Energy Efficiency Programs Savings (therms)**		281,203	108,000	705,000
Renewable Energy Technology Programs Savings (therms)***		0	0	33,400
Total Savings (therms)		281,203	108,000	738,400
Total Cumulative Savings (therms)		281,203	389,203	1,127,603
Savings (%)		0.201%	0.278%	0.726%
Difference Between Required Savings and Projected/Actual Savings(therms)		419,910	1,290,687	1,666,252

*2010 and 2011 sales represent actual sales collected from annual reports.

**2011 therm savings are from 2011 UNS Gas DSM 2011 Portfolio Savings Report.

***Renewable Energy Technology Programs Savings (therms) were revised in August 2012 to include therm savings for Solar Water Heating Commercial Gas New Construction.

PROPOSED PROGRAM CHANGES

13. UNS Gas' EE Plan is comprised of several new programs falling into both the residential and non-residential categories and new programs which apply across both categories of customers. UNS Gas has designed a comprehensive portfolio of programs in an effort to deliver gas energy savings to meet, or come close to meeting, annual DSM energy savings goals as outlined in the GEES. Due to the delay in the processing of the EE Plan, UNS Gas has requested previously filed 2011 budget information be used for the remainder of 2012 and previously filed 2012 budget information be used for 2013.

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1 A. Residential Programs: Existing Homes

2 14. UNS Gas is requesting budget approval to continue this program (previously
3 referred to as the Residential HVAC Program and Efficient Home Heating Program) plus approval
4 for adding these additional measures: high-efficiency residential boilers; pipe wrap; and high-
5 efficiency pool and spa heaters.

6 *Current Program*

7 15. This program was approved by the Commission in Decision Nos. 72045 dated
8 December 10, 2010, and 72056 dated January 6, 2011. The program is targeted to all existing
9 homes in need of energy efficiency improvements. The program has two components. The first
10 component is the current program. It involves an initial energy audit including the direct
11 installation of low-flow shower heads and faucet aerators. This is followed by the identification of
12 larger home energy efficiency improvements and a referral to a Building Performance Institute
13 ("BPI") certified contractor who will assist with the larger improvements.

14 *Proposed Changes*

15 16. UNS Gas is requesting to continue the current residential existing homes program
16 and add to it a second component that promotes the installation of pipe wrap, high-efficiency
17 boilers, and high-efficiency pool and spa heaters. The program hopes to achieve increased energy
18 savings from the installation of even more energy-efficient measures and contribute toward
19 transforming the industry to emphasize best practice building science principles.

20 17. The high-efficiency steam heating boilers will be offered with an incentive of \$500
21 per unit for a replacement on burnout of existing boilers. UNS Gas estimates to install 50 units the
22 first year and 60 units the second year. The pipe wrap option will be an option for a homeowner to
23 add pipe wrap to pipes on an existing water heater. UNS Gas plans to offer pipe wrap on the first
24 six feet of pipe with an incentive of \$12 per installation. They plan to install 200 units the first
25 year and 300 units the second year. The high-efficiency pool and spa heater option is a
26 replacement on burnout option allowing for an incentive of \$150 per unit with an estimated 5 units
27 installed in each of the two years. UNS Gas will provide program management, oversight, and

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marketing through website promotion, community interest groups, mass-market channels, brochures and bill inserts, trade ally marketing efforts, contractor enrollment and training.

18. A third party implementation contractor will be responsible for the recruitment, training, and mentorship of participating contractors, retailers and manufacturers; training energy auditors; data tracking; rebate processing; and technical support. Program delivery will be coordinated with Arizona Public Service ("APS") and UNS Electric to address any overlap among the utilities.

Proposed Budget

19. The 2012-2013 proposed budgets for the Residential Existing Homes Program is detailed below (with adjustments made to incentives and other program costs per UNS Gas' request in August 2012). Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential Existing Homes Program Budget

	2012	2013
Incentives*	\$176,894	\$612,076
Program Delivery**	\$354,438	\$421,148
Program Marketing	\$53,133	\$100,797
Utility Program Administration	\$23,981	\$24,701
Evaluation	\$24,338	\$45,339
Total Program Cost	\$632,784	\$1,204,061

*Max incentives were adjusted from \$350 per audit with 250 audits as the goal to a max incentive of \$200 per audit with 250 audits per the Company's request.

**Program Delivery Costs were reduced by \$100,000 from the original application per the Company's request.

Cost Effectiveness

20. Staff's review of the benefits and costs associated with the proposed changes with the addition of new measures in the Residential Existing Homes Program found that one of the new measures is not cost-effective at this point in time. Given the nature of the current natural gas market, the benefits in terms of therm and capacity savings do not outweigh the costs associated with the high efficiency boiler measure. Staff's benefit-cost analysis is presented in the table below.

Measure	Units	Present Value DSM Savings	Present Value DSM Cost	Benefit/Cost Ratio
High Efficiency Boiler	60	\$23,001.98	\$40,735.68	0.56
Pipe Wrap	300	\$5,249.22	\$5,193.74	1.01
Pool and Spa Heater	5	\$1,067.72	\$1,007.37	1.06

Recommendations

Decision No. _____

1 21. UNS Gas' analysis submitted with its original application indicated the Company
2 had calculated a measure level Societal Cost Test ratio for the three new measures as 1.2 for the
3 boiler, 1.2 for the pipe wrap, and 2.2 for the pool and spa heaters. Staff's analysis led to the
4 benefit-cost ratios indicated in the table above. Variances in the results can be pinpointed to a few
5 analysis differences including the fact that Staff's analysis includes the Program Level Non-
6 Incentive Costs into the cost per unit at the measure level. UNS Gas did not include program costs
7 in its Societal Cost Test analysis. Staff also utilized a calculated after-tax cost of capital as the
8 discount rate for UNS Gas equal to 6.99% based on data from UNS Gas' last rate case (Decision
9 No. 73142 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate. The avoided
10 natural gas cost used in Staff's calculation was based on index pricing provided by UNS Gas dated
11 May 18, 2012. UNS Gas' original application utilized avoided costs for UNS Gas as of August 4,
12 2010.

13 22. The last approved budget for this program was approved in Decision Nos. 72045
14 and 72056 equal to \$1,077,145 for 2011. The proposed budget for this program for 2012 as can be
15 seen above is \$632,784 which represents a decrease of \$444,361 or roughly a 41% decrease. The
16 increase in budget dollars for 2013 can be attributed to an increase in the projected number of
17 installed units associated with each approved measure.

18 23. Given the results of Staff's cost-benefit analysis, Staff has recommended approval
19 of the pipe wrap and the high efficiency pool and spa heaters but has not recommended approval
20 of the high efficiency boiler as a new measure for the Residential Existing Homes Program.

21 B. Residential Programs: New Construction

22 24. UNS Gas is requesting budget approval to continue this program with one
23 modification that updates the construction standard and energy savings to Energy Star® v3.

24 *Current Program*

25 25. This program was approved by the Commission in Decision No. 72023 dated
26 December 10, 2010, as the Energy Smart Home-Joint Program. The program is designed with an
27 incentive schedule that awards builders an additional incentive for installation of more efficient
28

gas heating and water heating equipment than that required in the residential new home construction program. To qualify for an incentive, homes must first qualify for the APS Energy Star new home program, be tested by an approved energy rater, and finally meet the required Home Energy Rating System ("HERS") Index score.

Proposed Changes

26. No new measures were requested for this program; however, new savings estimates were completed to update construction standards to Energy Star® v3.

Proposed Budget

27. The 2012-2013 proposed budgets for the Residential New Construction Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential New Construction Program Budget

	2012	2013
Incentives	\$8,800	\$10,600
Program Delivery	\$114,208	\$101,742
Program Marketing	\$11,846	\$10,819
Utility Program Administration	\$11,991	\$12,350
Evaluation	\$5,874	\$5,420
Total Program Cost	\$152,718	\$140,932

Cost Effectiveness

28. Staff did not complete a new cost-benefit analysis for this program as UNS Gas did not propose any changes to the existing approved measures.

Recommendations

29. The last approved budget for this program was in Decision No. 72023 and was equal to \$218,375 for 2011. The proposed budget for this program for 2012 as can be seen above is \$152,718 which represents a decrease of \$65,657 or roughly a 30% decrease. Staff has recommended continuation of the current program at the proposed budget numbers.

C. Residential Programs: Low Income Weatherization

30. UNS Gas is requesting budget approval to continue the LIWP and modify the income eligibility levels from 150% of poverty level to track more closely with the percent of poverty level set by the Low Income Home Energy Assistance Program ("LIHEAP"). The current

level set by LIHEAP is approximately 200% of poverty level. UNS Gas is also requesting a change to increase the maximum spending per home from \$2,000 to \$3,000 to be consistent with the funding given per home for UNS Electric and Tucson Electric Power Company ("TEP").

Current Program

31. This program was approved by the Commission in Decision No. 70180 dated February 27, 2008. The program is designed so that funding from UNS Gas, up to \$2,000 per home currently, is utilized to pay for energy efficient weatherization measures, equipment replacement and/or repair and other home improvements which may lower the average household energy consumption for low-income customers within the UNS Gas service territory. Weatherization measures are conducted in accordance with the Weatherization Assistance Program ("WAP") funded by the U.S. Department of Energy.

Proposed Changes

32. UNS Gas is requesting to continue the current residential Low Income Weatherization Program with an increase to the funding per home from \$2,000 to \$3,000 and adjust the income eligibility levels from 150% of poverty level to track more closely with the percent of poverty level set by LIHEAP.

Proposed Budget

33. The 2012-2013 proposed budgets for the Residential Low Income Weatherization Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential Low Income Weatherization Program Budget

	2012	2013
Incentives*	\$300,000	\$309,000
Program Delivery	\$19,113	\$19,686
Program Marketing	\$0	\$0
Utility Program Administration	\$7,994	\$8,234
Evaluation	\$13,084	\$13,477
Total Program Cost	\$340,191	\$350,397

*UNS Gas filed the \$3,000 per customer paid to the weatherization agency as an incentive. Staff does not consider dollars paid for a good or service as incentive dollars.

Cost Effectiveness

34. Staff's review of this program included an examination of the results from the LIWP for January through December 2011. According to the Annual DSM Progress Report filed by UNS Gas in April 2012, UNS Gas had 117 households receive weatherization assistance during 2011. The goal for the calendar year 2011 was 125 households. Savings reported for the same time period are 267,480 kWhs and 13,224 therms. By mid-year 2011, the Northern Arizona Council of Governments ("NACOG") had utilized all of the annual budget allocated to NACOG. An increase of \$25,000 was provided to NACOG in July 2011. NACOG completed 63% of the homes weatherized in 2011 for UNS Gas. No program marketing dollars were spent on this program in 2011 and none are being requested in 2012 as the popularity of the program is high without the need for advertising and promotion.

Recommendations

35. The last approved budget for this program was in Decision No. 70180 equal to \$123,915 for 2011. The proposed budget for this program is \$340,191 which represents an increase of \$216,276 or roughly a 175% increase. Given the high degree of interest in the program in 2011, Staff has recommended continuing the LIWP.

36. The change requested by the Company to increase the income eligibility from where it is currently set at 150% of the federal poverty level to track with LIHEAP which is currently 200% of poverty level seems reasonable to Staff as these guidelines are also used by the Governor's Office Of Energy Policy. However, Staff has not recommended approval of UNS Gas' request to provide increased dollar allocations per home being weatherized. Staff's benefit-cost analysis for the increase in spending versus leaving the per home dollar allocation where it is now revealed the current level of allocation is just slightly under 1 with a benefit-cost ratio of 0.98. Given that the environmental benefits that can be achieved from the LIWP are not monetized by Staff, Staff has recommended continuing with the current per home allocation of \$2,000.

D. Residential Programs: Energy Financing

37. UNS Gas is requesting budget approval to continue this pilot program with no modifications.

Current Program

38. This program was approved by the Commission in Decision No. 72062 (January 6, 2011) as a two-year pilot program. The program offers energy efficiency loans to UNS Gas customers who are seeking financing to assist in paying for energy efficiency improvements to their homes. Loan dollars can be used for energy efficiency measures that have been approved by the Commission as part of the Residential Existing Homes program. The program objective is to offer 9.99% interest unsecured loans with a 2% interest rate buy down resulting in a low-interest loan at 7.99%. Loans are available for up to \$10,000 with repayment terms up to 12 years.

Proposed Changes

39. UNS Gas is requesting to continue the current residential energy financing pilot program and to add those new measures submitted with the proposed changes to the Residential Existing Homes Program (pipe wrap, high-efficiency boilers, and high-efficiency pool and spa heaters) to the list of approved measures for which the loan can be used.

Proposed Budget

40. The 2012-2013 proposed budgets for the Residential Energy Financing Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential Energy Financing Program Budget

	2012	2013
Incentives	\$3,993	\$108,000
Program Delivery	\$93,673	\$359,533
Program Marketing	\$30,000	\$25,000
Utility Program Administration	\$3,997	\$8,234
Evaluation	\$5,000	\$5,150
Total Program Cost	\$136,663	\$505,917

Cost Effectiveness

41. Staff's review of this program included an examination of the results from the Residential Energy Financing Program for January through December 2011. According to the Annual DSM Progress Report filed by UNS Gas in April 2012, UNS Gas had no participants in this pilot program during 2011 and there were no savings reported for the same time period. Expenses for 2011 totaled \$16,917. UNS Gas redirected its efforts during 2011 to focus more on a

1 local lending partner given the relative small scale of the program. In December 2011, UNS Gas
2 had a contract with Vantage West Credit Union in Tucson to fund the residential loans. The loan
3 terms from the original agreed upon terms in Decision No. 72062 have changed slightly with the
4 switch to an in-state lender. There will be a reduction in the buy-down costs of approximately
5 \$310,000 during the first two years of the program, a more liquid treatment of the loan loss reserve
6 account, and a reduction in the term of the loan for the residential customer from 12 years to 10
7 years.

8 *Recommendations*

9 42. After talking with UNS Gas, Staff understands the challenges UNS Gas has faced in
10 implementing this program during a downturn in the economy when so many residential customers
11 are struggling to stay employed and pay existing bills. According to UNS Gas, it has had little
12 interest from customers but have a good dialogue open with participating contractors and are
13 compiling feedback on barriers. UNS Gas traditionally has low participation in measures over the
14 summer but plans to make an appeal to step up recruiting of participants in the fall.

15 43. The last approved budget for this program was in Decision No. 72062 equal to
16 \$321,386 for 2011. The proposed budget for this program is \$136,663 which represents a decrease
17 of \$184,723 or roughly a 57% decrease.

18 44. Given the slow start to the implementation of this pilot program tied to external
19 circumstances such as the downturn in the economy and the recent lender changes made by UNS
20 Gas, Staff believes that additional time is needed to accurately assess the interest in this program.
21 Staff has recommended continuing the current program and then re-evaluating the program in
22 UNS Gas' next EE Implementation Plan to gauge if interest and participation have increased.

23 E. Residential Programs: Home Energy Reports

24 45. UNS Gas is requesting budget approval to implement a new pilot program/measure
25 as part of the new Behavioral Comprehensive program. The Behavioral Comprehensive program
26 is designed to provide customers with more information to allow them to better understand and
27 manage their energy usage. This pilot program will take the form of distributing reports on an opt-
28 out basis to UNS Gas customers chosen at random that compare a customer's energy use to that of

1 neighbors with similar home attributes. The result would be to instill a sense of competition and
2 action in customers leading to reduced energy consumption.

3 *Current Program*

4 46. This is a new program and does not replace or modify any current program.

5 *Proposed Changes*

6 47. UNS Gas' Home Energy Reports Pilot Program is designed to affect habitual
7 behaviors in customers such as adjusting the thermostat, affect purchasing behaviors such as
8 buying efficient gas appliances, and affect the behavior of customers to participate in DSM
9 programs. UNS Gas is proposing a two-year pilot program with gas-only and dual-fuel home
10 energy reports. Because of the established boundaries of UNS Gas' service territory, UNS Gas has
11 customers who receive gas service from UNS Gas and electric service from UNS Electric or APS.
12 UNS Electric and APS currently have programs in place similar to the Home Energy Reports
13 Program that UNS Gas is proposing (UNS Electric's program was approved in Decision No.
14 72747 dated January 20, 2012 and APS' program was approved in Decision No. 71950 dated
15 November 1, 2010.). UNS Electric has agreed to work with the third party contractor, OPower, to
16 implement dual-fuel reports for those customers in both the UNS Gas and UNS Electric service
17 territories. OPower will provide gas-only home energy reports for UNS Gas customers in the APS
18 service territory as APS did not intend to provide customers in the UNS Gas service area with
19 home energy reports.

20 48. UNS Gas is proposing the Home Energy Reports Pilot Program as a pilot program
21 giving the Company time to gauge the effect of dual-fuel reports. It is uncertain at this point in
22 time whether UNS Electric customers receiving dual-fuel reports will elect to implement changes
23 that generate more electric or more gas savings. UNS Gas will bear the incremental increase in
24 cost to develop the dual-fuel reports. UNS Electric will report the electric energy savings from the
25 joint-utility homes while UNS Gas will report the gas energy savings from the same homes and not
26 report the electric savings as therm equivalents.

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Proposed Budget

49. The 2012-2013 proposed budgets for the Residential Home Energy Reports Pilot Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Residential Home Energy Reports Pilot Program Budget

	2012	2013
Incentives*	\$0	\$105,000
Program Delivery	\$22,204	\$17,720
Program Marketing	\$0	\$0
Utility Program Administration	\$0	\$4,117
Evaluation	\$0	\$1,268
Total Program Cost	\$22,204	\$128,105

*UNS Gas filed the report cost per customer paid to OPower as an incentive. Staff does not consider dollars paid for a good or service as incentive dollars.

50. All Home Energy Reports will be automatically mailed to the selected customers by OPower. There are no direct marketing dollars allocated for this program.

Cost Effectiveness

51. Staff's review of the benefits and costs associated with the proposed new Residential Home Energy Reports Pilot Program found that the home energy reports are not cost-effective at this point in time. In the analysis, Staff utilized UNS Gas' energy savings estimates which were based upon information provided by OPower. The savings estimates took into consideration that it is common for first year energy savings to be less than the second year energy savings due to the persistence of messaging received by customers and the impact of this messaging on customer behavior. Savings estimates average 1.15% of annual usage for each of the two years.

Measure	# of Participating Customers	Present Value DSM Savings	Present Value DSM Cost	Benefit/Cost Ratio
Gas-Only Energy Report	10,000	\$38,325.56	\$79,544.45	0.48
Dual-Fuel Energy Report	15,000	\$29,789.41	\$40,190.88	0.74

Recommendations

52. UNS Gas' analysis submitted with its original application indicated the Company had calculated a measure level Societal Cost Test ratio for the Home Energy Reports as 1.02 for the gas-only report, and 1.9 for the dual-fuel report. Staff's analysis led to the benefit-cost ratios

1 indicated in the table above. Variances in the results can be pinpointed to the fact that Staff's
2 analysis includes the Program Level Non-Incentive Costs into the cost per unit at the measure
3 level. UNS Gas did not include program costs in its Societal Cost Test analysis. Staff also utilized
4 a calculated after-tax cost of capital as the discount rate for UNS Gas equal to 6.99% based on data
5 from UNS Gas' last rate case (Decision No. 73142 dated May 1, 2012). UNS Gas' analysis
6 utilized a 4% discount rate. The avoided natural gas cost used in Staff's calculation was based on
7 index pricing provided by UNS Gas dated May 18, 2012. UNS Gas' original application utilized
8 avoided costs for UNS Gas as of August 4, 2010.

9 53. Given the results of Staff's cost-benefit analysis, Staff has not recommended
10 approval of the gas-only and dual-fuel home energy reports as new measures for the residential
11 segment.

12 F. Residential Programs: K-12 Education Kit

13 54. UNS Gas is requesting budget approval to implement a K-12 Education measure as
14 part of the new Behavioral Comprehensive program. As noted above, the Behavioral
15 Comprehensive program is designed to provide customers with more information to allow them to
16 better understand and manage their energy usage. This K-12 program incorporates energy-based
17 classroom curriculum instructing students on energy saving approaches that can be implemented in
18 their homes. This program is an extension of the existing UNS Electric education program
19 approved in Decision No.70401 (July 3, 2008).

20 *Current Program*

21 55. This is a new program and does not replace or modify any current program.

22 *Proposed Changes*

23 56. UNS Gas is requesting to implement a K-12 Education program which will target
24 teachers who are willing to add the energy-based classroom curriculum to their existing
25 educational program. The K-12 Education approach involves sending students home with energy
26 conservation kits containing a low-flow shower head, faucet aerator, and furnace whistle in
27 addition to educational materials regarding actions that can be taken to reduce energy use. A
28 student report card will be developed to determine how many of the items delivered in the kit were

1 actually installed. Implementation will be handled by a third party contractor, and extra effort will
2 be made to coordinate the school program with other energy efficiency efforts in the same
3 neighborhood. UNS Gas estimates delivering 1,000 energy conservation kits in the second year of
4 implementation.

5 *Proposed Budget*

6 57. The 2012-2013 proposed budgets for the Residential K-12 Education Program is
7 detailed below. Overall Program Development, Analysis, and Reporting Software costs would be
8 allocated across all of the cost-effective energy efficiency programs.

10 2012-2013 Proposed Residential K-12 Education Program Budget

	2012	2013
Incentives	\$0	\$33,333
Program Delivery	\$0	\$30,107
Program Marketing	\$0	\$0
Utility Program Administration	\$3,997	\$4,117
Evaluation	\$160	\$2,702
Total Program Cost	\$4,157	\$70,259

15 *Cost Effectiveness*

16 58. Staff's review of the benefits and costs associated with the proposed new
17 Residential K-12 Education Program found that the education program is cost-effective. In the
18 analysis, Staff utilized UNS Gas' energy savings estimates which assumed installation of the low
19 flow shower head (21 therm savings annually), kitchen aerator (34 therm savings annually), and a
20 furnace whistle (7 therm savings annually). The savings estimates also took into consideration
21 water savings benefits from the installation of a low-flow shower head and a kitchen aerator.

Measure	# of Kits	Present Value DSM Savings	Present Value DSM Cost	Benefit/Cost Ratio
K-12 Education Program	1,000	\$182,483.41*	\$75,015.30	2.43

* Total participation was estimated at 50% of the total number of kits distributed.

25 *Recommendations*

26 59. UNS Gas' analysis submitted with its original application indicated the Company
27 had calculated a measure level Societal Cost Test ratio for the Residential K-12 Education
28 Program of 18.7. Staff's analysis led to the benefit-cost ratio indicated in the table above.

1 Variances in the results can be pinpointed to the fact that Staff's analysis includes the Program
2 Level Non-Incentive Costs into the cost per unit at the measure level. UNS Gas did not include
3 program costs in its Societal Cost Test analysis. Staff also included the cost of the shower head,
4 kitchen aerator, and the furnace whistle as an implementation cost rather than an incentive cost as
5 UNS Gas did. In addition, Staff utilized a calculated after-tax cost of capital as the discount rate
6 for UNS Gas equal to 6.99% based on data from UNS Gas' last rate case (Decision No. 73142
7 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate. The avoided natural gas cost
8 used in Staff's calculation was based on index pricing provided by UNS Gas dated May 18, 2012.
9 UNS Gas' original application utilized avoided costs for UNS Gas as of August 4, 2010.

10 60. Given the results of Staff's cost-benefit analysis, Staff has recommended approval
11 of the Residential K-12 Education Program.

12 G. Residential and Commercial Programs: Solar Water Heating

13 61. UNS Gas is requesting budget approval to implement a Residential and
14 Commercial Solar Thermal Water Heating Program. The Solar Thermal Water Heating Program
15 would be offered to existing residential customers, residential new construction customers, and
16 existing and new small commercial customers.

17 *Current Program*

18 62. This is a new program and does not replace or modify any current program.

19 *Proposed Changes*

20 63. UNS Gas is requesting to implement a solar thermal water heating program which
21 offers incentives to participating customers on qualified solar thermal systems upon proof of
22 purchase and after the system is installed and operational. To qualify, a system must be listed by
23 the Solar Rating Certification Council ("SRCC") and have OG-300 certification. Typically,
24 customers in the UNS Gas service territory own and operate either conventional gas or electric
25 storage water heaters. These water heating systems can be very energy inefficient. However,
26 consumers are reluctant to change water heating systems due to capital constraints or lack of
27 awareness of more energy efficient options. UNS Gas is proposing to remove barriers to the
28 installation of solar thermal water heating and increase customer acceptance and program

1 participation by allowing customers to receive the incentive themselves or choose to assign the
2 incentive payment directly to the installer, thus reducing initial out-of-pocket investments. All
3 UNS Gas customers who are property owners of existing residential or small commercial facilities,
4 new home builders, and commercial property developers are eligible for this program.

5 64. UNS Gas plans to maximize opportunities for program coordination with other
6 approved UNS Gas energy efficiency programs and with any electric utility energy efficiency
7 programs in place to maximize benefits while minimizing promotional costs. The Company will
8 also utilize trained and qualified trade allies to inform and educate residential and commercial
9 customers about more efficient water heating technologies. The program has been designed to
10 offer average incentive dollars equal to \$699 per home for existing residential customers for up to
11 200 customers; incentive dollars equal to \$699 per home for residential new construction for up to
12 50 customers; and incentive dollars equal to \$400 per panel for up to 50 existing commercial
13 retrofits; and incentive dollars equal to \$400 per panel for up to 50 commercial new constructions.

14 *Proposed Budget*

15 65. The 2012-2013 proposed budgets for the Residential and Commercial Solar
16 Thermal Water Heating Program is detailed below. Overall Program Development, Analysis, and
17 Reporting Software costs would be allocated across all of the cost-effective energy efficiency
18 programs.

19 2012-2013 Proposed Solar Thermal Water Heating Program Budget

	2012	2013
Incentives*	\$0	\$207,237
Program Delivery	\$17,204	\$17,720
Program Marketing	\$688	\$8,198
Utility Program Administration	\$7,994	\$8,234
Evaluation	\$1,035	\$8,856
Total Program Cost	\$26,921	\$250,244

23 *2013 Proposed Incentives Budget was increased \$20,000 by the Company to cover incentives
24 not included in the original filing for Commercial New Construction.

25 *Cost Effectiveness*

26 66. Solar Thermal Water Heating is considered a RET. According to A.A.C. R14-2-
27 2504.A., RET programs are approved as part of the GEES. Energy savings from RET programs
28 expressed in therms or equivalent therms may be included toward meeting the energy saving goal.

1 Staff completed a cost-benefit analysis of the Solar Thermal Water Heating Program examining
2 the accuracy of the information and the economic feasibility of extending ratepayer dollars to
3 support such a program. The result of that analysis indicated that the Solar Thermal Water
4 Heating Program is not cost-effective at this point in time. However, as a RET program within the
5 GEES, the program is not required to lead to a benefit-to-cost ratio greater than one to be
6 implemented as part of an energy efficiency program.

7 *Recommendations*

8 67. Staff recognizes that reduced energy consumption from water heating may
9 represent significant savings potential for UNS Gas' Energy Efficiency Portfolio and getting UNS
10 Gas even closer to the required standards under GEES. Staff has recommended the Solar Thermal
11 Water Heating Program for approval under the following conditions:

- 12 • UNS Gas proposed as part of the Solar Thermal Water Heating Program that the Company
13 will monitor incentives paid to customers for the same system from both the gas and the
14 electric utility and that the maximum utility incentive that would be paid would be no more
15 than 85% of the installed cost of the system requiring that customers pay at least 15% of
16 the system installed cost. Staff does not agree that a customer should be able to collect an
17 incentive from both the electric and natural gas utility for the same installation of a Solar
18 Thermal Water Heater. Incentives are not designed for the customer to get up to 85% of
19 the installation of the equipment paid for by regulated utilities. Staff has recommended that
20 for areas of its system where the electric utility also offers an incentive for the installation
21 of a Solar Thermal Water Heater that UNS Gas coordinate with the associated utility prior
22 to payment of an incentive to insure that a customer does not receive incentive dollars from
23 both utilities.
- 24 • For those instances where UNS Gas is the utility paying the incentive to the customer for
25 the Solar Thermal Water Heater, Staff has recommended that the incentive not exceed 50%
26 of the installed cost of the system (comparable with the incentive cap set for Southwest Gas
27 with its Solar Water Heating Program).

28 ...

- 1 • UNS Gas will work with the associated electric utility in the service territory to insure that
- 2 the energy savings resulting from the installation of a RET are not double-counted by both
- 3 utilities to meet the required energy efficiency standards but rather is counted only by the
- 4 utility paying the incentive dollars for the system.
- 5 • UNS Gas will also incorporate into its DSM Portfolio Savings Reports details as to how
- 6 many Solar Thermal Water Heaters were installed and whether UNS Gas was the utility
- 7 paying the incentive and reporting the associated energy savings from each installation.

8 H. C&I Facilities Programs: Cooking, HVAC, Water Heating

9 68. UNS Gas is requesting budget approval to continue the C&I Facilities program plus
10 approval for adding 21 additional measures. UNS Gas is also requesting to modify the delivery of
11 the program to a direct install program similar to what was approved as a Small Business Program
12 for TEP in Decision No. 70457 (August 6, 2008) and the C&I Facilities Program for UNS Electric
13 approved in Decision No. 70524 (September 30, 2008).

14 *Current Program*

15 69. This program was approved by the Commission in Decision No. 70180 (February
16 27, 2008). The program was established with incentives for specific energy efficiency measures in
17 existing commercial and industrial facilities being paid directly to customers. The program is
18 designed to promote the installation of high-efficiency, gas-fueled equipment and systems at
19 existing commercial and industrial facilities within the UNS Gas service area. Current approved
20 measures within the C&I Facilities program include: High Efficiency Space Heating Hot Water
21 Boiler <300 kBtuh, High Efficiency Space Heating Hot Water Boiler >=300 kBtuh, High
22 Efficiency Furnace <300,000 Btuh (AFUE > 92), High Efficiency Furnace <300,000 Btuh (AFUE
23 > 95), Storage Water Heater >75,000 Btuh, High Efficiency Griddle, and Storage Water Heater
24 <75,000 Btuh. Overall participation in the program has been low. According to the Annual DSM
25 Progress Report for January through December 2011 filed in April 2012, 15 customers participated
26 in this program in 2011. The energy savings goal of 95,000 therms in 2011 was reached and
27 exceeded as the program recorded 195,820 therm savings. However, significant barriers exist
28 which prevent higher participation levels such as the economic climate pushing for reduced

1 spending when possible rather than increased incremental costs which may occur with the
2 purchase of more energy-efficient equipment.

3 *Proposed Changes*

4 70. UNS Gas is requesting to continue the current measures offered as part of the C&I
5 Facilities program and expand the program to include 21 new measures. The Company is also
6 requesting a revamp of how the program is delivered. The proposed changes include average
7 incentive levels of 75% of the incremental cost being paid directly to the contractor rather than
8 incentives paid to the customer. This program delivery method has worked well for TEP and UNS
9 Electric, and UNS Gas believes the change will remove barriers that are currently limiting
10 participating in the program as customers will only be required to pay the amount of the retro-fit
11 that is not covered by utility incentives. In addition, UNS Gas is also requesting to remove the
12 \$8,000 incentive caps for C&I customers and the \$25,000 incentive cap per school district as these
13 incentives have proven to be more of a disincentive to participation.

14 71. The new measures proposed by UNS Gas are listed in the table below along with
15 estimated average incentives per unit and the number of units expected for participation.

C&I Facilities Program Proposed New Measures		
Measure	Average Incentive \$ per unit	Estimated # of Units
High Efficiency Space Heating Steam Boiler	\$1,800	10
High Efficiency Fryer	\$900	15
High Efficiency Large Vat Fryer	\$900	15
High Efficiency Combination Oven	\$1,000	10
High Efficiency Convection Oven	\$1,000	10
High Efficiency Conveyor Oven (<25")	\$400	10
High Efficiency Conveyor Oven (>25")	\$900	10
High Efficiency Single Rack Oven	\$1,000	10
High Efficiency Double Rack Oven	\$1,000	10
High Efficiency Energy Star Steam Cooker	\$1,750	10
Condensing Unit Heater	\$400	10
Power Vented Unit Heater	\$2,000	10
Programmable Thermostats	\$100	50
High Efficiency Pool and Spa Heater (<500 kBtu/h)	\$150	5
Low-Flow Pre-Rinse Spray Valve	\$50	50
Commercial/Multifamily Clothes Washer CEE Tier 1	\$75	50
Commercial/Multifamily Clothes Washer CEE Tier 2	\$75	50
Commercial/Multifamily Clothes Washer CEE Tier 3	\$75	50
Steam Trap Survey and Replacement Commercial	\$250	30
Steam Trap Survey and Replacement Industrial	\$250	25
Custom Measures*	\$2,700	5

28 *Custom incentive is based on a projection of covering 75% of the incremental cost for a typical custom project and is equivalent to \$2,700 based on first year savings.

72. The proposed changes to the program mean that it will be operated as an “up-stream” market program where the incentives are offered directly to the qualified contractor who will then provide installation services to customers. The program will also include promotion and education material designed to provide decision makers in the small business arena with necessary data to make informed decisions.

Proposed Budget

73. The 2012-2013 proposed budgets for the C&I Facilities Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed C&I Facilities Program Budget

	2012	2013
Incentives	\$18,500	\$303,250
Program Delivery	\$215,877	\$441,693
Program Marketing	\$11,719	\$74,494
Utility Program Administration	\$3,997	\$8,234
Evaluation	\$10,004	\$33,107
Total Program Cost	\$260,096	\$860,778

Cost Effectiveness

74. Staff’s review of the benefits and costs associated with the proposed new measures in the C&I Facilities Program found that several of the new measures are not cost-effective at this point in time. As stated earlier, with the current depressed natural gas prices, the benefits in terms of therm and capacity savings do not necessarily outweigh the costs associated with the measures. Staff’s benefit-cost analysis is presented in the table below.

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Measure	Units	Present Value DSM Savings	Present Value DSM Cost	Benefit / Cost Ratio
High Efficiency Space Heating Steam Boiler	10	\$30,804.15	\$35,909.64	0.86
High Efficiency Fryer	15	\$16,957.33	\$16,524.48	1.03
High Efficiency Large Vat Fryer	15	\$20,160.38	\$18,842.92	1.07
High Efficiency Combination Oven	10	\$12,655.19	\$13,620.99	0.93
High Efficiency Convection Oven	10	\$9,609.15	\$11,006.65	0.87
High Efficiency Conveyor Oven (<25")	10	\$23,080.81	\$17,492.50	1.32
High Efficiency Conveyor Oven (>25")	10	\$26,535.08	\$21,622.60	1.23
High Efficiency Single Rack Oven	10	\$32,470.15	\$26,804.71	1.21
High Efficiency Double Rack Oven	10	\$66,353.41	\$55,847.90	1.19
High Efficiency Energy Star Steam Cooker	10	\$48,202.79	\$41,547.59	1.16
Condensing Unit Heater	10	\$15,154.82	\$19,353.47	0.78
Power Vented Unit Heater	10	\$58,873.40	\$71,129.35	0.83
Programmable Thermostats	50	\$7,181.01	\$9,791.84	0.73
High Efficiency Pool and Spa Heater (<500 kBtuh)	5	\$1,067.72	\$958.63	1.11
Low-Flow Pre-Rinse Spray Valve	50	\$3,013.51	\$2,374.27	1.27
Commercial/Multifamily Clothes Washer CEE Tier 1	50	\$27,046.23	\$7,412.55	3.65
Commercial/Multifamily Clothes Washer CEE Tier 2	50	\$32,854.71	\$9,293.98	3.54
Commercial/Multifamily Clothes Washer CEE Tier 3	50	\$35,132.86	\$19,821.15	1.77
Steam Trap Survey and Replacement Commercial	30	\$11,200.57	\$11,476.52	0.98
Steam Trap Survey and Replacement Industrial	25	\$42,841.52	\$31,176.38	1.37
Custom Measures	5	\$36,260.85	\$28,681.71	1.26

Recommendations

75. UNS Gas' analysis submitted with its original application indicated the Company had calculated a measure level Societal Cost Test ratio for each of the new measures as detailed below. Variances in the results can be pinpointed to analysis differences including the fact that Staff's analysis includes the Program Level Non-Incentive Costs into the cost per unit at the measure level. UNS Gas did not include program costs in its Societal Cost Test analysis. Staff also utilized a calculated after-tax cost of capital as the discount rate for UNS Gas equal to 6.99% based on data from UNS Gas' last rate case (Decision No. 73142 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate. The avoided natural gas cost used in Staff's calculation was based on index pricing provided by UNS Gas dated May 18, 2012. UNS Gas' original application utilized avoided costs for UNS Gas as of August 4, 2010. Staff also included monetized water and electricity benefits when applicable based on energy/water savings provided by UNS Gas.

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Measure	Staff Benefit/Cost Ratio	UNS Gas Societal Cost Test
High Efficiency Space Heating Steam Boiler	0.86	1.9
High Efficiency Fryer	1.03	1.6
High Efficiency Large Vat Fryer	1.07	1.8
High Efficiency Combination Oven	0.93	1.4
High Efficiency Convection Oven	0.87	1.1
High Efficiency Conveyor Oven (<25")	1.32	7.1
High Efficiency Conveyor Oven (>25")	1.23	3.6
High Efficiency Single Rack Oven	1.21	3.8
High Efficiency Double Rack Oven	1.19	5.5
High Efficiency Energy Star Steam Cooker	1.16	3.2
Condensing Unit Heater	0.78	2.4
Power Vented Unit Heater	0.83	2.4
Programmable Thermostats	0.73	1.2
High Efficiency Pool and Spa Heater (<500 kBtuh)	1.11	1.4
Low-Flow Pre-Rinse Spray Valve	1.27	3.9
Commercial/Multifamily Clothes Washer CEE Tier 1	3.65	3.6
Commercial/Multifamily Clothes Washer CEE Tier 2	3.54	3.7
Commercial/Multifamily Clothes Washer CEE Tier 3	1.77	2.0
Steam Trap Survey and Replacement Commercial	0.98	1.6
Steam Trap Survey and Replacement Industrial	1.37	8.1
Custom Measures	1.26	3.3

76. The last approved budget for this program was in Decision No. 70180 equal to \$218,545 for 2011. The proposed budget for this program is \$260,096 which represents an increase of \$41,551 or roughly a 19% increase.

77. Staff has recommended approval of all of the measures except: High Efficiency Space Heating Steam Boiler, High Efficiency Combination Oven, High Efficiency Convection Oven, Condensing Unit Heater, Power Vented Unit Heater, and Programmable Thermostats. For Staff's recommended measures, Staff did not monetize the environmental benefits associated with the proposed measures but recognizes that there are benefits to the environment from the implementation of the proposed measures. When taking into consideration those environmental benefits, Staff has recommended approving the Steam Trap Survey and Replacement Commercial as an additional measure to the C&I program.

78. After considering the low participation levels for this program and the proven success of the direct install methodology, Staff has recommended that UNS Gas be allowed to implement a direct install design whereby 75% of the incremental cost is being paid directly to the contractor rather than incentives paid to the customer. UNS Gas also requested the removal of the

1 \$8,000 incentive cap for C&I customers and the \$25,000 incentive cap per school district. After
2 reviewing the approval of these caps with Decision No. 70180, Staff is concerned that a removal of
3 the incentive cap would lead to several larger commercial and industrial customers receiving the
4 majority of the budgeted incentive dollars. However, Staff recognizes that with the increased
5 number of measures available, the incentive cap is more likely to be reached sooner than with the
6 limited number of measures available prior to this filing. Staff has recommended increasing the
7 incentive cap for C&I customers to \$16,000 and increasing the incentive cap per school district to
8 \$50,000.

9 I. Multifamily Programs: Direct Install

10 79. UNS Gas is requesting budget approval to implement a new Multifamily Direct
11 Install program to its current energy efficiency portfolio. This program is designed to encourage
12 energy efficiency upgrades in the multifamily buildings of five or more units. Three measures
13 have been proposed as part of the new Multifamily Direct Install Program: Low Flow Shower
14 Heads (1.5 GPM), Kitchen Faucet Aerators (1.5 GPM), and Bathroom Faucet Aerators (1 GPM).

15 *Current Program*

16 80. This is a new program and does not replace or modify any current program.

17 *Proposed Changes*

18 81. Multifamily housing represents a vast opportunity for energy efficiency potential;
19 however, this segment also brings with it substantial barriers to implementing energy efficiency
20 programs such as lack of capital and lack of awareness of the benefits to energy efficiency
21 upgrades. UNS Gas believes the 2-4 unit market segment is best served by its Residential Existing
22 Homes Program. At the same time the 5+ multifamily housing market segment can be reached by
23 both the C&I Facilities Program and this new Multifamily Direct Install Program.

24 82. The program would be structured such that delivery will occur through direct
25 installation of selected low cost energy efficiency improvements in existing complexes. The
26 program would be open to all existing multifamily housing complexes and new construction
27 projects within the UNS Gas service area with five dwelling units or more. All UNS Gas

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customers who are property owners of existing residential multifamily complexes or developers of new complexes with five or more dwelling units would be eligible for the program.

83. The program is designed so that delivery would be through a direct installation effort of the faucet aerators and low flow shower heads. The installation would be at no cost to the owner as the program itself would pay for the full cost of the product installation. The installation would be completed by either the facility's existing maintenance personnel or through a program authorized installation contractor.

84. UNS Gas will market the program via communications with apartment managers and owners including options such as direct outreach, local newspapers and radio, and bill inserts. UNS Gas will also work with contractors and industry specialists to communicate the new program. The Company anticipates that property managers will take advantage of the offer and donate the labor to install the energy efficient devices.

Proposed Budget

85. The 2012-2013 proposed budgets for the Multifamily Direct Install Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Multifamily Direct Install Program Budget

	2012	2013
Incentives	\$0	\$11,249
Program Delivery	\$47,204	\$103,783
Program Marketing	\$944	\$4,601
Utility Program Administration	\$0	\$4,117
Evaluation	\$1,926	\$4,950
Total Program Cost	\$50,074	\$128,700

Cost Effectiveness

86. Staff's review of the benefits and costs associated with the proposed new measures in the Multifamily Direct Install Program found that the Kitchen Faucet Aerator measure is cost-effective while the Low Flow Shower Head and Bathroom Faucet Aerator are not cost-effective at this point in time. Staff's benefit-cost analysis is presented in the table below.

Measure	Units	Present Value DSM Savings	Present Value DSM Cost	Benefit/Cost Ratio
Low Flow Shower Head	275	\$51,182.55	\$65,627.74	0.78
Kitchen Faucet Aerator	275	\$27,303.04	\$22,957.80	1.19
Bathroom Faucet Aerator	275	\$15,246.54	\$21,191.82	0.72

Recommendations

1 87. UNS Gas' analysis submitted with its original application indicated the Company
2 had calculated a measure level Societal Cost Test ratio for the three new measures as 8.6 for the
3 Low Flow Shower Head, 36.6 for the Kitchen Faucet Aerator, and 33.8 for the Bathroom Faucet
4 Aerator. Staff's analysis led to the benefit-cost ratios indicated in the table above. Variances in
5 the results can be pinpointed to differences including the fact that Staff's analysis includes the
6 Program Level Non-Incentive Costs into the cost per unit at the measure level. UNS Gas did not
7 include program costs in its Societal Cost Test analysis. Staff also utilized a calculated after-tax
8 cost of capital as the discount rate for UNS Gas equal to 6.99% based on data from UNS Gas' last
9 rate case (Decision No. 73142 dated May 1, 2012). UNS Gas' analysis utilized a 4% discount rate.
10 The avoided natural gas cost used in Staff's calculation was based on index pricing provided by
11 UNS Gas dated May 18, 2012. UNS Gas' original application utilized avoided costs for UNS Gas
12 as of August 4, 2010.

13 88. Given the results of Staff's cost-benefit analysis, Staff has not recommended
14 implementation of the new Multifamily Direct Install Program with only one measure, the Kitchen
15 Faucet Aerator. Staff has recommended the Company revisit filing to implement this program at
16 such time as when natural gas prices have increased leading to a higher value in savings from the
17 measures.

18 J. Support Program: Education and Outreach

19 89. UNS Gas is requesting budget approval to add this program to the UNS Gas energy
20 efficiency portfolio.

21 *Current Program*

22 90. This is a new program and does not replace or modify any current program.

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Proposed Changes

91. UNS Gas believes that to further its ability to meet overall performance goals in energy savings, its customers must understand the concept of energy efficiency and embrace those concepts. To meet this goal, UNS Gas is proposing to implement a new Education and Outreach program designed to encourage higher levels of participation in DSM programs. The Company will strive to educate residential and commercial customers on how to conserve energy and in turn lower their gas utility bills. UNS Gas will strive to educate customers about their energy use decisions, actions, and options for increasing energy efficiency through the new Education and Outreach Program.

92. The education of consumers about their energy use would occur through a variety of avenues such as: bill messages, website interaction through uesaz.com, UNS Gas customer care representatives will be knowledgeable about energy efficiency issues, bill inserts, email newsletters, and even participation at fairs and other local events. The intention behind the program is to help customers understand and embrace the concept of DSM and to encourage higher levels of participation in the DSM programs offered. This program would support all DSM program marketing and advertising efforts.

93. All UNS Gas residential and commercial customers will be eligible for this program. In addition, UNS Gas' existing "Bright" energy efficiency marketing platform will still be used to keep in touch with customers via social media such as Facebook and Twitter.

Proposed Budget

94. The 2012-2013 proposed budgets for the Education and Outreach Program is detailed below. Overall Program Development, Analysis, and Reporting Software costs would be allocated across all of the cost-effective energy efficiency programs.

2012-2013 Proposed Education and Outreach Program Budget

	2012	2013
Incentives	\$0	\$0
Program Delivery	\$25,735	\$61,813
Program Marketing	\$0	\$0
Utility Program Administration	\$3,997	\$8,234
Evaluation	\$0	\$2,802
Total Program Cost	\$29,731	\$72,849

1 *Cost Effectiveness*

2 95. Staff's review of this program did not include completing a cost-benefit analysis
3 since this is an education program, there is not a calculation for energy savings.

4 *Recommendations*

5 96. UNS Gas is requesting approval to recover the cost of the program through the
6 DSMS but will not have accompanying direct energy savings from this program. Staff agrees with
7 UNS Gas that the program will directly benefit other DSM programs by increasing awareness of
8 those programs and ultimately increasing participation in those programs. Staff has recommended
9 approval of the Education and Outreach Program as a new program offered in the UNS Gas energy
10 efficiency portfolio.

11 K. Support Programs: Codes Support

12 97. UNS Gas is requesting budget approval to add this pilot program to the UNS Gas
13 energy efficiency portfolio.

14 *Current Program*

15 98. This is a new program and does not replace or modify any current program.

16 *Proposed Changes*

17 99. UNS Gas is requesting to implement a pilot Energy Codes Support Program
18 ("ECSP") designed to increase energy savings in new construction and renovated buildings in both
19 the residential and commercial segments to improve compliance levels with building codes and
20 establish a process passing on periodic energy code updates. The Company recognizes that
21 building energy codes are a simple cost-effective way of achieving energy savings; however, the
22 Company also recognizes that many energy code officials lack the time and resources to enforce
23 those codes. In addition, building design professionals may not be well informed of energy code
24 requirements. UNS Gas believes that the ECSP will reduce energy consumption and assist in
25 improving compliance with existing and future energy codes.

26 100. This program will be open to all new construction and existing facilities that receive
27 gas service from UNS Gas. All UNS Gas customers who are property owners of existing
28 residential or small commercial facilities, new home builders, and commercial property developers

1 can take part in this program. To reach this audience with the energy codes message, UNS Gas
2 will hold trainings for local code officials and building design professionals to promote code
3 compliance. UNS Gas will also keep apprised of changes and market trends in energy codes and
4 pass that information on to local groups responsible for energy code compliance and enforcement.

5 101. In addition, the ECSP will facilitate energy savings through adoption of codes
6 where they currently don't exist and act as an advocate for energy code updates over time. The
7 program will also provide support to local jurisdictions through such activities as: classroom
8 training sessions/brown bag training sessions/field training sessions for code officials and building
9 professionals, purchasing energy code books for officials and supporting energy code
10 certifications. UNS Gas will also coordinate activities with the Southwest Energy Efficiency
11 Project ("SWEEP") to support research on and adoption of building codes and equipment
12 standards.

13 *Proposed Budget*

14 102. UNS Gas has proposed one-quarter of a full-time equivalent staff person at a
15 middle management level and one-quarter of a full-time equivalent of a junior staff person to
16 implement this program. The 2012-2013 proposed budgets for the Energy Codes Support Program
17 is detailed below. Overall Program Development, Analysis, and Reporting Software costs would
18 be allocated across all of the cost-effective energy efficiency programs.

19 2012-2013 Proposed Energy Codes Support Program Budget

	2012	2013
20 Incentives	\$0	\$0
21 Program Delivery	\$0	\$60,095
22 Program Marketing	\$0	\$9,014
Utility Program Administration	\$0	\$4,117
Evaluation	\$0	\$2,929
23 Total Program Cost	\$0	\$76,155

24 *Cost Effectiveness*

25 103. Staff's review of this program did not include completing a cost-benefit analysis
26 since this is an education program, there is not a calculation for energy savings.

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1 *Recommendations*

2 104. UNS Gas is requesting to implement this program fully in year two of this EE Plan.
 3 An integrated evaluation approach will be taken to develop savings methodologies for estimating
 4 savings from the implementation of more stringent energy code adoption and increase energy code
 5 compliance. UNS Gas will propose a calculation methodology to gauge energy savings from
 6 energy code adoption to the Commission.

7 105. Staff agrees with UNS Gas' assessment that energy savings can be achieved
 8 through the adherence to energy codes. Staff also understands that these codes vary widely across
 9 the state of Arizona and that education on what the codes are is key to implementation. Staff has
 10 recommended approval of the ECSP.

11 **BUDGET**

UNS GAS, INC.					
2011-2012-2013 EE BUDGET					
	Actuals	UNS Proposed	UNS Proposed	Staff Proposed	Staff Proposed
	2011	2012	2013	2012	2013
Residential Programs					
Existing Homes	\$564,125	\$632,784	\$1,204,061	\$616,873	\$1,152,534
New Construction	\$47,328	\$152,718	\$140,932	\$152,718	\$140,932
Low Income Weatherization	\$201,500	\$340,191	\$350,397	\$240,191	\$247,397
Energy Financing	\$16,917	\$136,663	\$505,917	\$136,663	\$505,917
Home Energy Reports	\$0	\$22,204	\$128,105	\$0	\$0
Behavioral Comprehensive (K-12)	\$0	\$4,157	\$70,259	\$4,157	\$70,259
Non-Residential Programs					
C&I Facilities	\$114,484	\$260,096	\$860,778	\$213,387	\$685,988
Multifamily Direct Install	\$0	\$50,074	\$128,700	\$0	\$0
Both Residential & Non-Residential Programs					
Solar Thermal Water Heating	\$0	\$26,921	\$250,244	\$26,921	\$250,244
Support Programs					
Education & Outreach	\$0	\$29,731	\$72,849	\$29,731	\$72,849
Codes Support	\$0	\$0	\$76,155	\$0	\$76,155
Program Development, Analysis, Reporting Software*	\$134,451	\$115,034	\$118,485	\$115,034	\$118,485
Baseline Study	\$7,046	\$0	\$0	\$0	\$0
Total Program Cost Per Year (Budget)	\$1,085,851	\$1,770,573	\$3,906,882	\$1,535,675	\$3,320,760
Accumulated Cost 2012-2013 (Budget)		\$1,770,573	\$5,677,455	\$1,535,675	\$4,856,435

*Program Development, Analysis, Reporting Software costs are allocated across all programs for benefit-cost analysis purposes.

106. The above table details UNS Gas' proposed energy efficiency budget for 2012 and 2013 and Staff's recommended budget which removes funding for those programs not cost-effective. Staff's proposed budget for 2012 represents an increase of approximately \$450,000 or a 41% increase over 2011 actuals. Staff's proposed budget for 2013 represents an increase of approximately \$1.8 million which is just slightly more than double the budget for 2012. Given the number of new measures UNS Gas is proposing that have a benefit-cost ratio greater than one, Staff has recommended approval of the Staff-proposed budget as stated above.

107. Given that a few of the measures proposed by UNS Gas were not considered cost-effective at this point in time, Staff has adjusted the projected savings UNS Gas may reach in 2012 and 2013 below.

PROJECTED ENERGY EFFICIENCY SAVINGS (with recommended measures)				
	2010	2011	2012	2013
Actual/Projected Sales (therms)	140,222,684	139,990,850	155,214,185	157,644,118
Required Savings (%)		0.50%	1.20%	1.80%
Required Savings From Prior Year Sales (therms)		701,113	1,679,890	2,793,855
Energy Efficiency Programs Savings (therms)		281,203	107,820	401,688
Renewable Energy Technology Programs Savings (therms)		0	0	33,447
Total Savings (therms)		281,203	107,820	435,136
Total Cumulative Savings (therms)		281,203	389,023	824,159
Savings (%)		0.201%	0.278%	0.531%
Difference Between Required Savings and Projected/Actual Savings (therms)		419,910	1,290,867	1,969,697

BUDGET SHIFTING

108. UNS Gas has requested the ability to shift up to 50 percent of its approved funds from residential to non-residential sector programs, or from non-residential to residential sector programs, based on program activity. The Company has also requested that it be allowed to increase the total budget for the energy efficiency programs by up to 25 percent, where cost-effective. The Company states that this type of flexibility maximizes participation in successful programs and allows it to continue accepting applications from customers in cases where an individual program may be over-subscribed.

1 While the Commission has allowed utilities to shift energy efficiency program funding among
2 programs or measures within the residential sector, or among programs or measures within the
3 non-residential sector, recent practice has been to limit shifting from sector to sector, to ensure that
4 both residential and non-residential customers have reasonable opportunity to participate in energy
5 efficiency programs. Allowing funding shifts among programs or measures within a sector allows
6 a reasonable degree of flexibility, but ensures reasonable access to participation in energy
7 efficiency programs for both residential and non-residential customers.

8 110. When considering the proposed budget that Staff has recommended includes a 41%
9 increase in budget dollars for 2012 and an almost doubling of budget for 2013, Staff believes that a
10 reasonable amount of flexibility has already been incorporated into the 2012 and 2013 proposed
11 budget. Staff has recommended that UNS Gas be allowed to shift funds (up to 25% of the
12 program's budgeted funds) between measures and programs within each customer segment but not
13 be allowed to shift funds between residential and non-residential segments (with the exception that
14 budgeted dollars for LIWP should not be allocated to other programs). Staff agrees with UNS Gas
15 that it is helpful for utilities to have the flexibility to increase budget slightly if necessary to
16 maximize participation. Given the increase in the overall budget as stated above, Staff has
17 recommended that UNS Gas be allowed to increase the total budget for the energy efficiency
18 programs by up to 5 percent, where cost-effective.

19 **MEASUREMENT, EVALUATION, AND RESEARCH ("MER")**

20 111. In its original application, UNS Gas requested that the reporting requirements
21 outlined in A.A.C. R14-2-2509 supersede the reporting requirements detailed in Decision No.
22 70011 dated November 27, 2008. Currently, UNS Gas is required to file its DSM surcharge filing
23 on April 1st each year (with the surcharge taking effect June 1st of each year) and its semi-annual
24 DSM reports on March 1st and September 1st of each year. A.A.C. R14-2-2509 outlines that
25 specific DSM reports be filed April 1st and October 1st of each year.

26 112. Staff agrees that in order to avoid confusion and duplicative filings, the reporting
27 requirements detailed in A.A.C. R14-2-2509 supersede those reporting requirements outlined in
28 ...

Decision No. 70011 so that UNS Gas would be required to file DSM reports on April 1st and October 1st of each year.

DSMS

113. For 2012 and 2013, UNS Gas is proposing to recover \$5.9 million through the DSMS. With the updated budget and surcharge filing on September 6, 2011, UNS Gas has requested a DSMS of \$0.0283 per therm. The current DSMS is \$0.0084 per therm. This change to the DSMS represents an increase of \$0.0199 per therm. The average total increase to a residential customer for the proposed DSMS with the full budget proposed by the Company is approximately \$0.90 per month.

114. In order to propose a DSMS that is most reflective of the Company's current position, Staff requested updated DSM balance (as of June 2012) information and projected sales for 2013. The updated balance and therms can be seen in the table below along with Staff's calculation of the proposed DSMS (with the reduced budget for measures not cost-effective) and the impact to a residential customer bill.

DEMAND SIDE MANAGEMENT SURCHARGE		
STAFF PROPOSED 2012-2013 PLAN CALCULATION		
(a)	Total Therm Sales (Including CARES):*	161,987,593
(b)	Less CARES Sales Forecast:	4,123,889
(a) - (b) = (c)	Total Therms Applicable to Surcharge	157,863,704
	Total Budget	\$3,320,760
	Carry-Over DSM Balance	\$630,931
(d)	Total DSM Cost to be Recovered	\$2,689,829
(d) / (c) = (e)	Staff Proposed Surcharge (per therm)	\$0.0170
(f)	Current Surcharge (per therm)	\$0.0084
(g)	Average Residential Monthly Usage (therms)	45
(f) x (g) = (h)	Surcharge \$ Collected (Current Surcharge)	\$0.3780
(e) x (f) = (i)	Surcharge \$ Collected (Proposed Surcharge)	\$0.7668
(i) - (h)	Staff Monthly Bill Impact for Residential Customers	\$0.3888

*Total therm sales for purposes of calculating the surcharge include all customer volumes including transport customers. Therm sales reported for purposes of meeting the GEES do not include transport only customers.

WAIVER REQUEST

115. In its original application, UNS Gas indicated that it would make all efforts to meet the 2011 EE Standard target of 0.50% of prior year sales. Actual 2011 savings were 0.201%. Given the result for 2011 and the time that has passed in implementing a new energy efficiency plan with additional measures, UNS Gas has requested a waiver of the GEES in A.A.C. R14-2-2504.B. Specifically in its September 2011 filing, UNS Gas has requested a modification of the GEES as detailed in the table below.

Requested Waiver To Standard		
Calendar Year	Cumulative Energy Efficiency Standard (Current)	Cumulative Energy Efficiency Standard (UNS Gas Requested Modification)
2011	0.5%	0.08%
2012	1.2%	0.61%
2013	1.8%	1.20%
2014	2.4%	1.80%
2015	3.0%	2.40%
2016	3.6%	3.00%
2017	4.2%	3.60%
2018	4.8%	4.20%
2019	5.4%	4.80%
2020	6.0%	5.40%

116. Staff recognizes UNS Gas' efforts in implementing cost-effective energy efficiency programs that are beneficial to all customer classes. Staff also realizes that the current market dominated with low natural gas prices leads to difficulty in finding cost-effective options to save on natural gas usage. UNS Gas has an established energy efficiency program and has provided new measures for increasing the opportunity for energy savings. However, Staff believes that UNS Gas should continue to strive to hit the established GEES each year. Staff has recommended a waiver be granted to UNS Gas of the GEES Standards established in A.A.C. R14-2-2504.B for the calendar years 2012 and 2013. Waivers of future years' requirements can be evaluated during future years' implementation plan reviews.

117. Staff has recommended that UNS Gas implement its plan as modified by Staff above for the remainder of 2012 and all of 2013 calendar years and be required to file its next

1 energy efficiency plan no later than June 1, 2013 pursuant to A.A.C. R14-2-2505. Also, as
2 indicated above, Staff has recommended that A.A.C. R14-2-2509 supersede those reporting
3 requirements outlined in Decision No. 70011 so that UNS Gas would be required to file DSM
4 reports on April 1st and October 1st of each year.

5 118. In addition, Staff has recommended that the UNS Gas EE Plan filed in compliance
6 with A.A.C. R14-2-2505 be considered sufficient in meeting the requirements of R14-2-313.

7 119. Staff also has recommended that UNS Gas revise Exhibit 3 (Clean Version and
8 Redlined Version) from its September 6, 2011 filing, the Demand Side Management Surcharge
9 (DSMS) tariff – Rider R-2, so that the tariff is consistent with the terms of the Commission's
10 Decision. This tariff should be submitted to Docket Control within 30 days of the effective date of
11 this Decision.

12 CONCLUSIONS OF LAW

13 1. UNS Gas, Inc. is an Arizona public service corporation within the meaning of Article
14 XV, Section 2, of the Arizona Constitution.

15 2. The Commission has jurisdiction over UNS Gas, Inc. and over the subject matter of
16 the Application.

17 3. The Commission, having reviewed the application and Staff's Memorandum dated
18 October 19, 2012, concludes that it is in the public interest to approve UNS Gas, Inc.'s proposed
19 2011-2012 Energy Efficiency Implementation Plan with the modifications described herein.

20 ORDER

21 IT IS THEREFORE ORDERED that UNS Gas, Inc.'s proposed 2011-2012 Energy
22 Efficiency Implementation Plan be adopted as modified by this Decision.

23 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Residential Existing Homes
24 Program is hereby approved with the modifications proposed by Staff.

25 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Residential Low Income
26 Weatherization Program is hereby approved with the modifications proposed by Staff.

27 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Residential Energy Financing
28 Pilot Program is hereby approved with the modifications proposed by Staff.

1 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Residential Behavioral
2 Comprehensive Program incorporating the Home Energy Reports is denied.

3 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Residential Behavioral
4 Comprehensive Program incorporating the K-12 Education Kit is hereby approved with the
5 modifications proposed by Staff.

6 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Residential and Commercial
7 Solar Water Heating Program is hereby approved with the modifications proposed by Staff.

8 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Commercial & Industrial
9 Facilities: Cooking, HVAC, & Water Heating Program is hereby approved with the modifications
10 proposed by Staff.

11 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Multifamily Direct Install
12 Program is denied.

13 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Education and Outreach
14 Program is hereby approved with the modifications proposed by Staff.

15 IT IS FURTHER ORDERED that UNS Gas, Inc.'s proposed Codes Support Program is
16 hereby approved with the modifications proposed by Staff.

17 IT IS FURTHER ORDERED that the total budget be decreased to \$1,535,675 for 2012 and
18 \$3,320,760 for 2013.

19 IT IS FURTHER ORDERED that UNS Gas, Inc. is hereby granted a waiver from
20 compliance with the Gas Energy Efficiency Standard for the years 2012 and 2013.

21 IT IS FURTHER ORDERED that UNS Gas, Inc. file its next Energy Efficiency
22 Implementation Plan no later than June 1, 2013 for the 2014-2015 calendar years pursuant to
23 A.A.C. R14-2-2505.

24 IT IS FURTHER ORDERED that UNS Gas, Inc. follow reporting requirements as outlined
25 in A.A.C. R14-2-2509 and those reporting requirements supersede any reporting requirements
26 outlined in Decision No. 70011.

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1 IT IS FURTHER ORDERED that UNS Gas, Inc. file with Docket Control, as a compliance
2 matter in this case, a tariff consistent with the terms of the Commission's Decision within 30 days
3 of the effective date of this Decision.

4 IT IS FURTHER ORDERED that UNS Gas, Inc. provide notice to its customers of the
5 increased DSM surcharge within 30 days of the effective date of this Decision in a form acceptable
6 to Staff.

7 IT IS FURTHER ORDERED that UNS Gas, Inc.'s 2011-2012 Energy Efficiency
8 Implementation Plan as modified by this Decision filed in compliance with A.A.C. R14-2-2505 is
9 hereby deemed sufficient in meeting the filing requirements of A.A.C. R14-2-313.

10 IT IS FURTHER ORDERED that this Decision shall become effective immediately.

11 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

12
13 CHAIRMAN

COMMISSIONER

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16 COMMISSIONER

COMMISSIONER

COMMISSIONER

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18 IN WITNESS WHEREOF, I, ERNEST G. JOHNSON,
19 Executive Director of the Arizona Corporation Commission,
20 have hereunto, set my hand and caused the official seal of
21 this Commission to be affixed at the Capitol, in the City of
22 Phoenix, this _____ day of _____, 2011.

23 _____
24 ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

25 DISSENT: _____

26
27 DISSENT: _____

28 SMO: RSP:sms/WVC

Decision No. _____

1 SERVICE LIST FOR: UNS GAS, INC.
2 DOCKET NO.: G-04204A-11-0149

3 Mr. Bradley S. Carroll
4 UNS Energy Services
5 88 E. Broadway Boulevard MS HQE910
6 PO Box 711
7 Tucson, Arizona 85702

8 Michael W. Patten
9 ROSHKA DEWULF & PATTEN, PLC.
10 One Arizona Center
11 400 East Van Buren Street, Suite 800
12 Phoenix, Arizona 85004

13 Ms. Lyn A. Farmer, Esq.
14 Chief Administrative Law Judge
15 Hearing Division
16 Arizona Corporation Commission
17 1200 West Washington Street
18 Phoenix, Arizona 85007

19 Ms. Janice M. Alward
20 Chief Counsel, Legal Division
21 Arizona Corporation Commission
22 1200 West Washington Street
23 Phoenix, Arizona 85007

24 Mr. Steven M. Olea
25 Director, Utilities Division
26 Arizona Corporation Commission
27 1200 West Washington Street
28 Phoenix, Arizona 85007